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Virtual Currency Estate Planning, Bit by Bit*

Abigail J. Farmer and Cory Elizabeth Tyszka

This article addresses the issues that virtual currencies, specifically bitcoins, pose for the mindful estate planner. First, it explains what bitcoins are, where they come from, and what their legal status is. Next, it identifies special problems that bitcoins pose in estate planning. Finally, it concludes by offering solutions to these problems, including recommended transfer mechanisms and gifting strategies.

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I. INTRODUCTION

Gone are the days when marshaling a decedent's assets entailed looking through filing cabinets and personal effects for bank statements, letters, or other clues that might lead to assets. Now an executor must also search for intangible assets, an altogether more difficult proposition. For example, even though many banks still send paper statements to their clients, a decedent may have had an account accessed and managed entirely online, such as an E*TRADE account. Will the decedent's executor be aware of, or have access to, that account? What about electronic media such as photos, music, or e-books? Did the decedent have a social networking profile of some monetary value? Digital asset management is a real concern for estate planning.

An easily-overlooked digital asset is digital currency, such as bitcoins. To begin, what are bitcoins, how do they work, and can they be transferred at death? After all, although digital currency functions like legal currency in that it can be used to pay for goods and services,¹ it rarely exists in tangible form, and even when it does, the physical coins are more collectibles than anything; most transactions using bitcoins are entirely digital. The same characteristics that make virtual currencies so appealing – namely the high levels of security and control – make them vulnerable to being lost if their owner does not craft an estate plan to transmit them at death. Failure to plan ahead can result in these virtual assets with very real value being lost when their owner passes.²

The risk of losing digital assets at death is nothing new. Since several excellent articles already address digital asset management in general, including the management of a decedent's copyrighted assets, digital media (e.g., music, e-books, movies, and photographs), electronic bank accounts, email accounts, and social media accounts,³ this article

¹ See I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

² See Sandi S. Varnado, *Your Digital Footprint Left Behind at Death: An Illustration of Technology Leaving the Law Behind*, 74 LA. L. REV. 719, 751 n. 212 (2014).

³ See, e.g., *id.* at 723-25 (commenting that failing to include one's digital footprint in an estate plan renders the plan incomplete); Greg Lastowka & Trisha Hall, *Living and Dying in a Virtual World: Estate Planning for Digital Assets*, N.J. LAW., Oct. 2013 at 29, 29 (reasoning that estate administrators should not disregard a decedent's digital assets because they are analogous to prior forms of personal property and have value); Nicole Schneider, *Social Media Wills – Protecting Digital Assets*, J. KAN. B. ASS'N, June 2013 at 16; Emily Stutts, *Will Your Digital Music and E-Book Libraries “Die Hard” with You?: Transferring Digital Music and E-Books Upon Death*, 16 SMU SCI. & TECH. L. REV. 371 (2013); Claudine Wong, *Can Bruce Willis Leave His iTunes Account to His Children?: Inheritability of Digital Media in the Face of EULAs*, 29 SANTA CLARA COMPUTER & HIGH TECH. L.J. 703 (2013); Maria Perrone, *What Happens When We Die: Estate Planning of Digital Assets*, 21 COMMLAW CONSPPECTUS 185, 185-86 (2012) (arguing that increasing digitalization calls for a set of uniform laws to protect Americans' digital assets); Naomi Cahn, *Postmortem Life On-Line*, PROB. & PROP., July-Aug. 2011, at 36, 36 (noting

focuses on as-yet unanalyzed cryptocurrency.⁴ More specifically, this article highlights the special challenges that virtual currency poses for estate planning. Part II gives an overview of what virtual currency is, how it works, and how it is used. It then summarizes I.R.S. Notice 2014-21, the I.R.S.'s response to the demand for guidance regarding the taxation of virtual currency. Part III demonstrates the need to consider virtual currency in estate planning and explains how I.R.S. Notice 2014-21 impacts the way virtual currency should be handled in an estate plan. Finally, it offers some practical planning suggestions to ensure that the management of digital currency goes as smoothly as possible. Part IV concludes.

II. BACKGROUND

Virtual currency is “digital, decentralized, partially anonymous currency, not backed by any government or other legal entity, and not [currently] redeemable for gold or other commodity.”⁵ Although it can operate like “real” currency (e.g., dollars and euros), virtual currency does “not have legal tender status in any jurisdiction.”⁶ Also, virtual currency is “convertible,” meaning that it has an equivalent value in real currency, can act as a substitute for real currency, and can be exchanged for dollars, euros, or other currencies.⁷ Although many virtual currencies have a physical coin form, these exist primarily as collectors’ items;⁸ the vast majority of virtual currency transactions take place at the digital level.

At present, there are more than sixty virtual currencies traded at various exchanges, from bitcoins to dogecoins.⁹ Although this article fo-

that estate planning questionnaires are beginning to request information about a client’s online presence).

⁴ “A cryptocurrency is a medium of exchange like *normal* currencies such as USD, but designed for the purpose of exchanging digital information through a process made possible by certain principles of cryptography.” Carter Graydon, *What is Cryptocurrency?* CRYPTOCOINS NEWS (last updated Sept. 6, 2014, 11:17 AM), <https://www.cryptocoinsnews.com/cryptocurrency/>.

⁵ See Reuben Grinberg, *Bitcoin: An Innovative Alternative Digital Currency*, 4 HASTINGS SCI. & TECH. L.J. 159, 160 (2012).

⁶ I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

⁷ *Id.*

⁸ See Nermin Hajdarbegovic, *10 Physical Bitcoins: The Good, the Bad and the Ugly*, COINDESK, (Sept. 14, 2014, 19:15 BST), <https://letstalkbitcoin.com/the-world-of-physical-bitcoins/>.

⁹ See Samuel Gibbs, *Nine Bitcoin Alternatives for Future Currency Investments*, THE GUARDIAN (Nov. 28, 2013, 10:35 EST), <http://www.theguardian.com/technology/2013/nov/28/bitcoin-alternatives-future-currency-investments>; see also DOGECOIN, dogecoin.com (last visited Sept. 17, 2014); Stephen Hutcheon, *The Rise and Rise of Dogecoin, the Internet’s Hottest Cryptocurrency*, THE SYDNEY MORNING HERALD (Jan.

cuses on bitcoins, as they are the oldest and most established virtual currency,¹⁰ the planning principles discussed herein apply to all virtual currencies.

A. Bitcoins and Their Origins

When discussing bitcoins, the distinction between “Bitcoin” and “bitcoins” must be clear. When spelled with a capital “B,” Bitcoin refers to the payment network itself – “the first decentralized peer-to-peer payment network that is powered by its users with no central authority or middlemen.”¹¹ When spelled in all lowercase, bitcoin refers to the currency itself: bitcoins.¹² More concretely, the difference between “bitcoin” and “Bitcoin” is much like the difference between PayPal and dollars: an individual pays with dollars (the currency) through PayPal (the network).¹³ However, instead of having the currency controlled by the United States federal government and a network controlled by a single company, neither bitcoins nor the Bitcoin network are controlled by any single entity.¹⁴

In practice, Bitcoin is a mobile app or program that allows each user to have a Bitcoin wallet with which to send and receive bitcoins.¹⁵ Digital signatures corresponding to the sending addresses protect the authenticity of each transaction; this means that users have full control over sending bitcoins from their Bitcoin addresses.¹⁶ Each of these transactions is recorded in the “block chain,” the public Bitcoin network ledger, which contains every transaction ever processed.¹⁷ Because the block chain contains the record of every bitcoin transaction, a user’s computer can verify the validity of each transaction.¹⁸

24, 2014), <http://www.smh.com.au/technology/technology-news/the-rise-and-rise-of-dogecoin-the-internets-hottest-cryptocurrency-20140124-31d24.html>.

¹⁰ Katherine Sagona-Stophel, *Bitcoin 101: How to Get Started with the New Trend in Virtual Currencies*, THOMPSON REUTERS, <http://site.thomsonreuters.com/business-unit/legal/digital-economy/bitcoin-101.pdf> (last visited Sept. 17, 2015).

¹¹ *Vocabulary*, BITCOIN.ORG, <https://bitcoin.org/en/vocabulary> (last visited Sept. 17, 2015); *Frequently Asked Questions*, BITCOIN.ORG, <https://bitcoin.org/en/faq> (last visited Sept. 17, 2015) [hereinafter *Frequently Asked Questions*].

¹² Erik Voorhees, *What is Bitcoin? Welcome to Cryptocurrency*, YBITCOIN, Spring 2014, at 8, 8.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Frequently Asked Questions*, *supra* note 11.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

The block chain is a very clever solution to the problem of double spending.¹⁹ In the real world, if someone used a gold coin to buy a new watch, he could not then use that same coin to buy a new pair of shoes because he would no longer be in physical possession of that coin. Because virtual currency has, for all intents and purposes, no tangible counterpart, there is no way to tell whether a given virtual coin has already been spent.²⁰ The easiest way to eliminate double spending would be to assign a number to each virtual coin and keep that number in a virtual ledger in which all transactions are recorded.²¹ If only a limited number of individuals had access to the ledger, however, they would be free to invent virtual coins or say that a given coin had not been spent in a given transaction.²² And that is the genius of the block chain: Bitcoin uses the block chain as a public, *decentralized* ledger.²³ Access is not limited to a few individuals, but is instead spread throughout the Bitcoin network.²⁴ As the network grows, tampering with the ledger becomes increasingly difficult because all transactions must match the block chain.²⁵ Cooking one book is easy, but cooking thousands is a much more difficult proposition. This helps prevent the fraudulent creation of new bitcoins, which in turn helps bitcoins maintain their value.

And yet bitcoins must come from somewhere. Unlike traditional currencies, there is no government in charge of minting bitcoins; instead, individuals “mine” bitcoins through processing the bitcoin transactions that make up the block chain.²⁶ Bitcoin mining is the process of “running SHA256 double round hash verification processes in order to validate Bitcoin transactions and provide the requisite security for the public ledger of the Bitcoin network.”²⁷ In plain English, this means a bitcoin miner uses special hardware to process transactions by mathe-

¹⁹ Double spending is a major issue unique to virtual currency that must be overcome if recipients are to have faith in the value of their transactions. See Erik Bonodonna, *Bitcoin and the Double Spending Problem*, NETWORKS II COURSE BLOG FOR INFO 4220 (Mar. 29, 2013), <https://blogs.cornell.edu/info4220/2013/03/29/bitcoin-and-the-double-spending-problem/>; see also Nik Custodio, *Explain Bitcoin Like I'm Five*, MEDIUM.COM (Dec. 12, 2013), <https://medium.com/p/73b4257ac833>.

²⁰ See Bonodonna, *supra* note 19.

²¹ See Custodio, *supra* note 19; Bonodonna, *supra* note 19.

²² See Custodio, *supra* note 19.

²³ James Haight, *Beyond Bitcoin: Why the Block Chain Is What Really Matters*, COMPUTERWORLD (Nov. 24, 2014, 10:06 AM), <http://www.computerworld.com/article/2851414/beyond-bitcoin-why-the-block-chain-is-what-really-matters.html>.

²⁴ See *id.*

²⁵ See *id.*

²⁶ See generally *Bitcoin Mining Guide: Getting Started with Bitcoin Mining*, BITCOINMINING.COM, <http://www.bitcoinmining.com/getting-started/> (last visited Sept. 17, 2015).

²⁷ See *id.*

matically running the transactions through the block chain; in return, the bitcoin miner receives bitcoins. Processing these transactions consumes a great deal of electricity and generates enormous amounts of heat and therefore requires very powerful, specialized hardware to process transactions.²⁸ Without this specialized hardware, a miner will spend more on electricity than he or she will earn mining bitcoins.²⁹ In addition to this hardware, bitcoin miners also need specialized software to process transactions.³⁰ The reward for processing transactions is currently twenty-five bitcoins per transaction block, but this reward halves every time 210,000 blocks have been mined.³¹ In this way, the number of bitcoins awarded for processing transactions will slowly taper off, limiting the total number of bitcoins that will ever be in circulation.³² With this rate of return, and due to the massive amounts of computing power required to process transactions, individual mining efforts are unlikely to be profitable; as a result, miners often join a mining pool, where multiple people combine computing power to process transactions and each one is paid in proportion to the amount of work contributed.³³

Once an individual has received bitcoins, whether through mining efforts or as payment for goods or services, he or she must have a place to store them. Bitcoins are stored in “wallets,” which “can be software, mobile, [or] web-based.”³⁴ A person sends bitcoins to his or her wallet by using a unique address that only belongs to that person; to ensure the wallet’s security, he or she can set up a two-factor authentication system, or simply keep the wallets on an offline computer with no Internet access.³⁵

Bitcoin security is maintained through the use of public key cryptography.³⁶ As a very simplified example of how public key cryptography works, imagine that you wish to send a private message. One way to ensure the security of your message is to use a cryptographic algorithm to transform that message into an encrypted form, which can only be decrypted by using a key.³⁷ Without the key, the encrypted message is

²⁸ See *id.*

²⁹ See *id.*

³⁰ See *id.*

³¹ See John Kelleher, *What is Bitcoin Mining*, INVESTOPEDIA, <http://www.investopedia.com/articles/investing/043014/what-bitcoin-mining.asp> (last visited Sept. 17, 2015).

³² See *id.*

³³ See *id.*

³⁴ *Bitcoin Mining Guide*, *supra* note 26.

³⁵ See *id.*

³⁶ See Steven Roose, *How Are Public and Private Keys Related to the Wallet?*, STACKEXCHANGE (Jan. 6, 2014, 18:51) <http://bitcoin.stackexchange.com/questions/19950/how-are-public-and-private-keys-related-to-the-wallet>.

³⁷ See 2 THE APACHE SOFTWARE FOUND., SECURITY AND SERVER PROGRAMS ch. 39.1.1 (2010).

worthless; so long as the key is kept secret, the message remains secure.³⁸ But you do not want to be the only person who can read the message; in order for the message to have value, someone else must be able to read it as well. The question then becomes how to securely pass on the key to the message recipient. Public key cryptography is one solution to this problem: it defines an algorithm that uses two keys, either of which may be used to encrypt a message.³⁹ If Key A is used to encrypt the message, then Key B must be used to decrypt it.⁴⁰ This allows you to send multiple messages using the same decryption key; you can securely send and receive messages by publishing one key (the public key) and keeping the other secret (the private key).⁴¹

As applied to bitcoins, a Bitcoin address is shorthand notation for a public key.⁴² When you make a transaction to an address, you are stating that you give the right to send a bitcoin to the person who owns the private key corresponding to that address.⁴³ The transaction recipient can complete the transaction by signing it using *his* private key; because others can verify the signature by using the public key (the Bitcoin address), the signature proves that he owns the key without having to disclose it.⁴⁴

As complicated as the underlying theory and mining processes are, bitcoins are remarkably easy to use. In that sense, they are rather like cars: you don't need to know how to build a car to drive one, and you don't need to understand how bitcoins are mined to spend them.⁴⁵ Making and receiving bitcoin payments requires only a wallet application on your computer.⁴⁶ To make a payment, a bitcoin owner simply opens her wallet application, enters the recipient's address and the payment amount and hits "send."⁴⁷ And it is this ease of use that takes bitcoins beyond mere theory and into the real world: people already use bitcoins to purchase items in the real world, from sports tickets to sandwiches.⁴⁸

³⁸ See *id.*

³⁹ See *id.*

⁴⁰ See *id.*

⁴¹ See *id.*

⁴² See *Roose*, *supra* note 36.

⁴³ See *id.*

⁴⁴ See *id.*

⁴⁵ *Voorhees*, *supra* note 12.

⁴⁶ *Frequently Asked Questions*, *supra* note 11.

⁴⁷ *Id.*

⁴⁸ See, e.g., *Sacramento Kings Become First Professional Sports Team to Accept Virtual Currency Bitcoin*, NAT'L BASKETBALL ASS'N (Jan. 16, 2014), <http://www.nba.com/kings/news/sacramento-kings-become-first-professional-sports-team-accept-virtual-currency-bitcoin>; Jessica Roy, *I Bought Everything on My Christmas List with Bitcoin*, TIME (Dec. 5, 2013), <http://newsfeed.time.com/2013/12/05/i-bought-everything-on-my-christmas-list-with-bitcoin/#ixzz2sgQtHG00>.

Beyond such small transactions, bitcoins also make it easy to purchase big-ticket items. On February 19, 2014, one bitcoin enthusiast used the currency to purchase a luxury villa in Bali, Indonesia.⁴⁹ The buyer paid more than 800 bitcoins for the villa; although the exact price was not disclosed, this was the equivalent of more than \$500,000.⁵⁰ The villa's seller commented, "The whole thing was done in an hour. If we had gone through normal bank transfers, it would have taken a few days or a week."⁵¹

Even as bitcoins gain traction for use in larger transactions, however, they still pose practical difficulties. For example, if the private key for a bitcoin is lost, it cannot be retrieved, and so that bitcoin is also lost.⁵² In this sense, losing a bitcoin is like losing an actual coin. But unlike physical coins, another individual cannot simply "find" that lost bitcoin; instead, it goes dormant, meaning it falls out of circulation.⁵³ This effect is intentional; because only 21 million bitcoins will ever be mined,⁵⁴ as more bitcoins are inevitably lost, the remaining bitcoins' value will increase – the opposite of inflation.⁵⁵

B. Legal Significance of Bitcoins

Given virtual currency's relative newness and complexity, it is unsurprising that the federal government and legal scholars have struggled to determine how best to regulate it.⁵⁶ This section presents an overview of the most recent developments in virtual currency regulation.

1. *In the United States: I.R.S. Notice 2014-21*

Until recently, one of the most important questions regarding virtual currency was whether the I.R.S. would treat it as currency or property.⁵⁷ On March 26, 2014, the I.R.S. laid that question to rest, issuing Notice 2014-21, which stated that for U.S. federal tax purposes, virtual currency would be treated as property.⁵⁸

⁴⁹ Robin Sidel, *Bitcoins Buy a Villa in Bali*, WALL ST. J. (Mar. 19, 2014, 6:09 PM), <http://www.wsj.com/articles/SB10001424052702304026304579449710288367366>.

⁵⁰ *See id.*

⁵¹ *Id.* (internal quotation marks omitted).

⁵² *See Frequently Asked Questions*, *supra* note 11.

⁵³ *See id.*

⁵⁴ *See id.*

⁵⁵ *See id.*

⁵⁶ *See* Laura Saunders, *How Will the I.R.S. Tax Bitcoin?*, WALL ST. J. (Dec. 20, 2013, 7:10 PM), <http://online.wsj.com/news/articles/SB10001424052702304773104579268322915488180>.

⁵⁷ *See id.*

⁵⁸ *See* I.R.S. Notice 2014-21, 2014-16 I.R.B. 938; I.R.S., *IRS Virtual Currency Guidance: Virtual Currency Is Treated as Property for U.S. Federal Tax Purposes; General*

The notice addresses how the I.R.S. taxes virtual currency, defined as a “digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value.”⁵⁹ The I.R.S. distinguishes virtual currency from “real” currency in that virtual currency does “not have legal tender status in any jurisdiction.”⁶⁰ Even so, “the sale or exchange of convertible virtual currency, or the use of convertible virtual currency to pay for goods and services in a real-world economy transaction, has very real tax consequences that may result in a tax liability.”⁶¹

Virtual currency, the notice explains, will not be treated as “currency that could generate a foreign currency gain or loss for U.S. federal tax purposes.”⁶² Instead, “virtual currencies will be treated as property;” thus, tax principles that apply to property transactions will also apply to transactions involving virtual currency.⁶³ This means that a taxpayer who receives virtual currency as payment for goods or services must include the fair market value of the virtual currency, which is measured in U.S. dollars as of the date that the virtual currency was received.⁶⁴ If the virtual currency is listed on an exchange, with an exchange rate established by market supply and demand, then the virtual currency is converted into U.S. dollars at the exchange rate.⁶⁵

Because virtual currency must be converted into dollars for reporting purposes, this means that individuals can have a gain or loss on transactions involving it. The tax basis for virtual currency is the fair market value of the virtual currency in dollars on the date of receipt.⁶⁶ If the fair market value of the property received in exchange for the virtual currency exceeds the taxpayer’s adjusted basis of the virtual currency, then the taxpayer has a taxable gain; if the value received is less than the adjusted basis, then the taxpayer has a loss.⁶⁷ The type of gain/loss depends on how the taxpayer holds the virtual currency: if it is held as a capital asset, then gains and losses will be taxed as capital gains and losses, otherwise it will be an ordinary gain or loss.⁶⁸

Rules for Property Transactions Apply, <http://www.irs.gov/uac/Newsroom/IRS-Virtual-Currency-Guidance> (last updated Feb. 25, 2015).

⁵⁹ I.R.S. Notice 2014-21.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

Determining whether virtual currency is held as a capital asset then becomes of critical importance. As a general rule,

[g]ains from the sale or exchange of capital assets shall be excluded to the extent that such gains are allocated to corpus and are not (A) paid, credited, or required to be distributed to any beneficiary during the taxable year, or (B) paid, permanently set aside, or to be used for the purposes specified in section 642(c).⁶⁹

Losses from the sale or exchange of capital assets are excluded, except to the extent such losses are taken into account in determining the amount of gains from the sale or exchange of capital assets which are paid, credited, or required to be distributed to any beneficiary during the taxable year.⁷⁰ The exclusion under section 1202 is also not taken into account.⁷¹

2. *In Other Countries*

The I.R.S. decision to tax bitcoins as property, not currency, is in keeping with other countries' decisions. In August 2013, the German Finance Ministry declared that bitcoins are “‘units of account’ and therefore mining them is a form of ‘money creation.’ This means that . . . any profits from bitcoins will be charged the capital gains tax.”⁷² And on March 3, 2014, the United Kingdom released its own Revenue and Customs Brief regarding the taxation of bitcoins and virtual currencies, which said that bitcoins could be subject to the corporation tax, income tax, or capital gains tax, depending on “the activities and parties involved.”⁷³ A few other countries have passed laws regarding whether bitcoins will be treated as foreign currency or property, but most seem to view the virtual currency with suspicion and are waiting to see how it develops before passing further laws.⁷⁴

⁶⁹ I.R.C. § 643(a)(3).

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Germany Plans Tax on Bitcoin After Virtual Currency Recognized as “Private Money”*, THE TELEGRAPH (Aug. 13, 2013, 2:15 PM), <http://www.telegraph.co.uk/finance/globalbusiness/10252383/Germany-plans-tax-on-bitcoin-after-virtual-currency-recognised-as-private-money.html>.

⁷³ UK HM REVENUE & CUSTOMS, REVENUE AND CUSTOMS BRIEF: TAX TREATMENT OF ACTIVITIES INVOLVING BITCOINS AND OTHER SIMILAR CRYPTOCURRENCIES (Mar. 3, 2014), *available at* <https://www.gov.uk/government/publications/revenue-and-customs-brief-9-2014-bitcoin-and-other-cryptocurrencies/revenue-and-customs-brief-9-2014-bitcoin-and-other-cryptocurrencies>.

⁷⁴ See Kashmir Hill, *Bitcoins’ Legality Around the World*, FORBES (Jan. 31, 2014, 6:02 PM), <http://www.forbes.com/sites/kashmirhill/2014/01/31/bitcoins-legality-around-the-world/>. However, The European Union Court of Justice, the highest court in the EU,

One potential concern with other countries' regulation of bitcoins and other virtual currencies is that, because bitcoins do not have a physical location, they could be considered as being located "everywhere;" i.e., because the Bitcoin network is decentralized, bitcoins are fair game for every nation to tax.⁷⁵ Owning bitcoins is not like holding shares in a foreign corporation, where the corporation generates income in that country, and the owner is taxed accordingly; bitcoins are property held outside of any one particular country.⁷⁶ Likewise, there is little risk that a United States citizen's bitcoin mining activities could be the target of foreign taxation; they are most likely conducted in the United States as a form of self-employment, which is also outside of foreign jurisdiction.⁷⁷ Finally, given that most countries are still struggling to decide how to tax their own citizens' bitcoins, there seems little chance that they would go beyond their borders, "looking for trouble." Certainly for estate planning purpose, foreign taxation poses little risk at this time.⁷⁸

III. ANALYSIS

A. Concerns for Bitcoin Owners

1. *Impact of I.R.S. Notice 2014-21*

Primarily, I.R.S. Notice 2014-21 has the strongest implications for bitcoin owners' tax planning.⁷⁹ To begin, for purposes of determining gains and losses, bitcoin owners must determine whether their bitcoins are held as capital assets.⁸⁰ Under section 1221(a) of the Internal Reve-

recently ruled that bitcoins trades on an exchange should be exempt from the Value Added Tax in the same way that other currencies are exempt from the VAT. Stephanie Bodoni, *EU's Top Court Rules That Bitcoin Exchange is Tax-Free*, BLOOMBERG: BLOOMBERG BUSINESS (Oct. 22, 2015, 6:29 AM), <http://www.bloomberg.com/news/articles/2015-10-22/bitcoin-virtual-currency-exchange-is-tax-free-eu-court-says-ig21wzcd>. The court reasoned that tax exemption is appropriate because the trade involves "the exchange of different means of payment." *Id.* While it is too soon to say what net impact this decision will have, the ruling is a step in favor of bitcoins' increased legitimacy and acceptance as a currency.

⁷⁵ See *Frequently Asked Questions*, *supra* note 11.

⁷⁶ See *Frequently Asked Questions*, *supra* note 11 (calling attention to I.R.S. Notice 2014-21 and its implications for bitcoin miners).

⁷⁷ See Kelleher, *supra* note 31.

⁷⁸ See *What is Bitcoin and How Does It Fit Into Estate Planning?*, TINDALL GASK BENTLEY LAWYERS, <http://tgb.com.au/blog/what-bitcoin-and-how-does-it-fit-estate-planning>.

⁷⁹ See generally I.R.S. Notice 2014-21, 2014-16 I.R.B. 938. Although many of these concerns apply to income tax planning, these concerns also apply in crafting an estate plan, especially one involving *inter vivos* transfers.

⁸⁰ See *supra* Part II.B.1.

nue Code, capital assets are property held by the taxpayer (whether or not connected with his or her trade or business), except:

- Inventory the taxpayer holds primarily for sale to customers in the ordinary course of his trade or business;
- Real and depreciable property used in his or her trade or business;
- A copyright, literary, musical, or artistic composition, a letter or memorandum, or similar property held by the taxpayer who created it;
- Accounts or notes receivable acquired in the ordinary course of trade or business for services rendered or for the sale of property;
- United States Government publications;
- Commodities derivative financial instruments held by a commodities derivatives dealer;
- Hedging transactions; and
- Supplies regularly used or consumed in the ordinary course of trade or business.⁸¹

In most situations, bitcoins will not fall into these categories unless they are used for a hedging transaction; thus, they are probably capital assets.⁸² However, if they are held as inventory in a trade or business, they might not be considered capital assets.⁸³ For example, miners could be said to hold bitcoins as inventory; in that case, the bitcoins would be subject to ordinary income taxes.⁸⁴

Next, bitcoin owners must keep meticulous records for two reasons: first, to establish the requisite holding period for long-term versus short-term capital gains, and second, to determine the bitcoins' tax basis.⁸⁵ Beyond giving the date for establishing fair market value, careful records are critical for determining whether gains and losses are long term or short term.⁸⁶ If a bitcoin owner uses a wallet to store bitcoins, he or she can rely on the block chain for his or her records: the block chain permanently records transactions to and from an address, along with the date and time of the transaction.⁸⁷ This is an attractive option. The block chain is public, disinterested from the taxpayer, and difficult

⁸¹ See *Are Bitcoins a Capital Asset?*, BITCOINTAXSOLUTIONS.COM (Jan. 8, 2014), <http://www.bitcointaxsolutions.com/are-bitcoins-capital-asset/> (citing I.R.C. § 1221(a)).

⁸² See *id.*.

⁸³ See *id.*.

⁸⁴ See *id.*.

⁸⁵ *Id.*.

⁸⁶ See Tyler Robbins, *A Primer on Bitcoin Taxation: Record Keeping* 16 (Mar. 25, 2014) (unpublished manuscript) (on file with the ACTEC Law Journal).

⁸⁷ See *id.*.

to tamper with, making it extremely reliable.⁸⁸ Beyond the block chain, if the bitcoin owner uses a brokerage, such as Coinbase, a file with a full list of trades may be available.⁸⁹ Regardless of what record-keeping method a bitcoin owner uses, since the tax basis is the fair market value on the date of receipt,⁹⁰ it is essential to know when he or she acquired those bitcoins.⁹¹

Those who receive bitcoins as a gift will generally inherit their donor's tax basis.⁹² However, if the donor's basis were more than the market value of the bitcoins at the time the gift was made, the tax basis would not be determined until the bitcoins are sold in the future.⁹³ The process is similar to determining the tax basis for gifts of stock. First, the donee calculates the gain or loss using the donor's tax basis.⁹⁴ If this results in a gain, then the donor's tax basis is the proper basis.⁹⁵ If this results in a loss, then the donee calculates the gain or loss using the market value on date of receipt as the basis.⁹⁶ If this second calculation results in a loss, then that is the correct basis to use.⁹⁷ If it results in a gain, the donee will report nothing.⁹⁸

As a final word of caution, bitcoin owners should remember that every transaction in which they use bitcoins to purchase goods and services is considered a taxable event.⁹⁹ That means if a bitcoin was acquired on a day when bitcoins traded at \$400 and was used to purchase goods on a day when bitcoins traded at \$500, the bitcoin owner has made a gain of \$100 that must be reported.

2. *Bitcoin Valuation*

As an initial matter, it is worth reiterating that virtual currency has real value.¹⁰⁰ Bitcoins have inherent value, but this value is difficult to determine with any consistency because a bitcoin's worth fluctuates like that of any other currency.¹⁰¹ This volatility is exemplified by regular

⁸⁸ *See id.*

⁸⁹ *See id.*

⁹⁰ *See infra* Part II.B.1.

⁹¹ *See* Robbins, *supra* note 86, at 12-13.

⁹² *See* I.R.C. § 1015(a).

⁹³ *See id.*

⁹⁴ *See id.*; Treas. Reg. § 1.1015-1(a)(1).

⁹⁵ § 1.1015-1(a)(1).

⁹⁶ *See id.*

⁹⁷ *See id.*

⁹⁸ *See id.*

⁹⁹ *See* I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

¹⁰⁰ *See id.*

¹⁰¹ *See* Alexis Kleinman, *What Is Bitcoin, The Newest \$1 Billion Currency?*, The HUFFINGTON POST, http://www.huffingtonpost.com/2013/03/29/what-is-bitcoin_n_2978872.html (last updated Mar. 29, 2013, 2:10 PM).

and sometimes drastic fluctuations in currency exchange rates. For example, for their first two years of existence, bitcoins were valued at exchange rates of just a few dollars, and in January 2013, one bitcoin exchanged for only \$13.¹⁰² This spiked to an all-time peak in December 2013, when one bitcoin was valued at \$1,151, and as of September 17, 2015, one bitcoin was valued at \$233.¹⁰³

Part of this fluctuation is due to bitcoins' increasing legitimacy and buying power,¹⁰⁴ but forces within the Bitcoin network have impacted bitcoins' value as well.¹⁰⁵ For example, when bitcoins are lost, they go dormant, and the relative value of each remaining bitcoin increases.¹⁰⁶ Also, when bitcoins are mined, this puts more bitcoins in circulation, and the value of each bitcoin decreases accordingly.¹⁰⁷ This makes sense because it is the simple law of supply and demand: the more bitcoins that are in circulation, the less value each individual bitcoin has.¹⁰⁸ However, the 21 million limit on the number of bitcoins that will ever be mined, discussed above,¹⁰⁹ caps the deflationary effect that further mining efforts would cause.¹¹⁰ For estate planning purposes, a bitcoin owner can estimate how much a gift of bitcoins will be worth at the time of his or her death, but until the transfer is made, the estimated gift value remains just that: an estimate.

3. Mining Pool Valuation

An individual's membership in a mining pool must also be valued because that interest will continue after death. The question of mining pool valuation, though, is complex and difficult. Valuing the hardware and software, specialized for processing transactions and solving problems in the block chain, is relatively straightforward: equipment and software can be assigned a dollar value based on the amount paid for them and their age. More difficult, however, is the valuation of the bitcoins the miner will receive for transactions not yet processed; after all, the mining operations are already set up to capture this future

¹⁰² *Market Price (USD)*, BLOCKCHAIN, https://blockchain.info/charts/market-price?timespan=all&showDataPoints=false&daysAverageString=1&show_header=true&scale=0&address= (last visited Sept. 17, 2015).

¹⁰³ *Id.*

¹⁰⁴ See Grinberg, *supra* note 5, at 178.

¹⁰⁵ See *id.* at 175-76.

¹⁰⁶ See Lauren Orsini, *What Happens to Lost Bitcoins?* READWRITE (Jan. 13, 2014), <http://readwrite.com/2014/01/13/what-happens-to-lost-bitcoins> ("[T]he finite number of bitcoins will result in rising prices . . .").

¹⁰⁷ See *Frequently Asked Questions*, *supra* note 11.

¹⁰⁸ See *id.*

¹⁰⁹ See *supra* Part II.A.

¹¹⁰ See *id.*

value.¹¹¹ At present, there does not seem to be much guidance on whether this is essentially an annuity, for which the present value must be calculated, or if a different valuation method should be used. Even if it is determined that the mining pool interest will be treated as an annuity, calculating the time value of money is difficult, if not impossible, when the exchange rate of dollars to bitcoins is constantly shifting based on consumer confidence and total bitcoin mining activity.

B. Forming an Effective Estate Plan

Bitcoins pose unique problems to the typical estate plan, including locating and identifying bitcoin wallets, transferring or gifting bitcoins, and devising bitcoins.¹¹² While the long-term impact of whether bitcoins will have lasting economic value is yet to be seen, they are gaining enough currency – pun intended – to have garnered the attention of the I.R.S., as evidenced by Notice 2014-21.¹¹³ Thus, the prudent estate planner should at least be aware of the potential issues bitcoins raise and plan accordingly.

Under I.R.C. § 2033, all property a decedent owned or otherwise had an interest in is taken into the decedent's gross estate.¹¹⁴ Because bitcoins have actual buying power and the I.R.S. has acknowledged the legitimacy of virtual currency, bitcoins can rightly be considered property in which a decedent has an interest, to be disposed of as part of a decedent's gross estate.¹¹⁵ Given the virtual nature of bitcoins and the accompanying security measures that make bitcoins so appealing,¹¹⁶ including bitcoins in a person's estate plan becomes a valuable and important consideration.¹¹⁷

A mindful bitcoin owner who forms a coherent estate plan can alleviate some of the difficulties that bitcoins can pose. This section will identify the particular problems associated with bitcoins in intestacy, describe bitcoin transfer mechanisms, discuss the implications of gifting bitcoins, and suggest effective ways to devise bitcoins.

¹¹¹ As discussed *supra* in Part II.A, bitcoin miners receive bitcoins in exchange for their mining efforts. However, the rate of return for bitcoin mining is designed to decrease over time, thus limiting the profitability of mining. Nonetheless, the fewer bitcoins in circulation, the higher the value each has; this is where the difficulty in calculating the time value of bitcoins arises.

¹¹² See Charles Linn & Renee Gabbard, *Estate Planning for Digital Currencies*, BRYAN CAVE (Feb. 25, 2015), <http://trustbryancave.com/estate-planning-for-digital-currencies/>.

¹¹³ I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

¹¹⁴ See I.R.C. § 2033.

¹¹⁵ See I.R.S. Notice 2014-21; § 2033.

¹¹⁶ See *supra* Part II.A.

¹¹⁷ See Linn & Gabbard, *supra* note 112.

1. *Bitcoins in Intestacy*

Intestacy is undesirable for any estate, but it is especially problematic when it comes to an estate that includes bitcoins. Bitcoins are property, and can be very valuable property at that.¹¹⁸ However, the very security and anonymity that make bitcoins so attractive to investors can be an insurmountable barrier to passing on that value through intestacy.¹¹⁹ For example, as explained above, bitcoins are secured by private keys that are necessary to access them. If a bitcoin key is lost, that bitcoin goes dormant and is lost.¹²⁰ As of this writing, there are no methods to recover the key; indeed, because bitcoins' security is one of their most appealing features, there will likely never be a mechanism to do so. Although the block chain effectively tracks bitcoins to prevent double spending of the same bitcoin, it is incapable of identifying who owns a given bitcoin.¹²¹ The same protections that make bitcoins so secure thus renders them vulnerable to permanent loss.¹²²

With nearly fourteen billion dollars in bitcoins in circulation, some estates could lose significant assets if their bitcoins were to go dormant. Because bitcoins are neither tracked in public records, nor otherwise searchable by an owner's credentials – e.g., by name, address, date of birth, or social security number – it is quite possible that an intestate decedent's estate administrator might never know of the bitcoins' existence.¹²³ A decedent who enjoyed buying and selling with bitcoins from the comfort of his or her home computer may not have informed his or her family members of this habit. And even if the estate is aware of decedent's virtual currency, it still cannot access the property without the proper keys.¹²⁴

On the other hand, because bitcoins owners are not trackable or identifiable, a decedent's fiduciary who is aware of the property and possesses bitcoin keys could conveniently "lose" a decedent's bitcoins to circumvent traditional estate disposition and taxation.¹²⁵ However, such conduct is clearly fraud, and if the I.R.S. can establish fraud, there is no applicable statute of limitations;¹²⁶ thus, it would behoove the decedent's fiduciary to be honest from the start.

¹¹⁸ See I.R.S. Notice 2014-21.

¹¹⁹ See Linn & Gabbard, *supra* note 112.

¹²⁰ See *supra* Part II.A.

¹²¹ *Frequently Asked Questions*, *supra* note 11.

¹²² *Id.*

¹²³ See *Frequently Asked Questions*, *supra* note 11.

¹²⁴ See *id.*

¹²⁵ See *id.*

¹²⁶ See I.R.C. § 6501(c).

As with most assets, a bitcoin owner's best course of action is either to transfer bitcoins prior to death or to have a plan for the transfer of bitcoins upon death, which can be achieved by pre-planned bitcoin transfers, by gift, or by devise.¹²⁷

2. *Bitcoin Transfer Mechanisms*

a. *Create a Copy of the Bitcoin Wallet*

The easiest way to pass on bitcoins is to simply give someone else the corresponding private keys.¹²⁸ This is a quick, easy way to allow multiple parties to access the funds.¹²⁹ However, this is less than desirable for several reasons. First, while this allows the original owner to retain access to the bitcoins, it also allows the beneficiary to have immediate access to the bitcoins.¹³⁰ Handing over the keys to give the beneficiary immediate access requires trusting the beneficiary not to spend the bitcoins before the original owner wishes.¹³¹ Furthermore, even if the individual trusts the intended beneficiary, there are further security risks: the beneficiary must maintain the same level of vigilance as the original wallet owner, otherwise the risk of third party theft is compounded.¹³²

b. *M-of-N Transactions*

One potential way to resolve the security issue is to create an M-of-N transaction system. This is essentially an escrow system built into the Bitcoin protocol that allows transactions requiring multiple signatures.¹³³ With this method, individuals can set up a transaction that requires M-of-N parties to sign: for example, the original bitcoin owner, the intended beneficiary, and a third party (e.g., a trustee or the executor of the individual's will) are each given the power to approve the transaction, but only two of the three parties' approval is required for the transaction to be valid.¹³⁴ Thus when the original owner passes, the beneficiary and the third party can sign off on the transaction and transfer the bitcoins to the beneficiary.

An M-of-N a transaction has several advantages. To begin, these kinds of transactions are already allowed by the Bitcoin protocol, so

¹²⁷ See Linn & Gabbard, *supra* note 112; Lastowka & Hall, *supra* note 3.

¹²⁸ See *Frequently Asked Questions*, *supra* note 11.

¹²⁹ See *What is Bitcoin and How Does It Fit Into Estate Planning?*, *supra* note 78.

¹³⁰ See *id.*

¹³¹ See *id.*

¹³² See *Frequently Asked Questions*, *supra* note 11; see also *What is Bitcoin and How Does It Fit Into Estate Planning?*, *supra* note 78.

¹³³ See *What is Bitcoin and How Does It Fit Into Estate Planning?*, *supra* note 78.

¹³⁴ See *id.*

they are easy to set up.¹³⁵ Furthermore, by using a third party to approve the completion of the transaction an individual can rest easy knowing that the transaction will be completed only upon his or her passing.¹³⁶ Finally, this method of passing bitcoins to a beneficiary does not entail giving the beneficiary access to the entire wallet, but only to that specific transaction.¹³⁷ This does mean, however, that once the transaction is set up, the bitcoins must be kept in that same wallet. Such a transaction requires that the sending and receiving addresses be specified, and if the bitcoins are moved to a new wallet, the sending address from the original transaction cannot be used.¹³⁸

c. *Dead Man's Switch*

This method is a variation on the M-of-N transaction, but instead of using a third party to verify the transaction, a computer server verifies if a user-provided expression is true.¹³⁹ For example, the computer server will periodically send a message asking the bitcoin owner if he or she is alive; if this is the case, he or she will click a link, and if not, the program will wait and try again.¹⁴⁰ If the bitcoin owner does not respond after a specified number of tries, the program will activate the switch and execute the transaction to transfer the bitcoins.¹⁴¹

This variation on the M-of-N transaction has all the advantages of the standard M-of-N transaction, with the added benefit that the bitcoin owner does not need to involve a third party and can simply set up the program.¹⁴² On the other hand, the same caveats as with M-of-N transactions apply: the sending and receiving addresses must be written into the transaction and cannot be changed.¹⁴³

d. *Lock Time Transactions*

Lock time transactions are the rough equivalent of post-dating a check: the transaction will not be accepted until the time specified is valid.¹⁴⁴ In a lock time transaction, the bitcoin owner provides the transaction's private key to the beneficiary, to be broadcast when the owner

¹³⁵ Wayne Parker, *Protect Your Bitcoin Wallet After You Die*, TRADEBLOCK (May 13, 2013), <http://tradeblock.com/research/protect-your-bitcoin-wallet-after-you-die-2/>.

¹³⁶ G.F., *I Didn't Come Here for an Argument*, THE ECONOMIST (Feb. 19, 2014, 12:15 AM), <http://www.economist.com/blogs/babbage/2014/02/virtual-currency>.

¹³⁷ Parker, *supra* note 135.

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*

passes. If the owner is still alive at the time the transaction becomes valid, however, he or she can always cancel the transaction by moving the bitcoins to a new address.¹⁴⁵

Such a system maintains the security of the bitcoin wallet because the beneficiary only has the ability to broadcast the transaction and does not have access to the wallet itself.¹⁴⁶ The Bitcoin protocol already provides for this type of transaction, so a bitcoin owner can set this up without any outside involvement.¹⁴⁷ Like M-of-N transactions, however, the transaction can only be validated in the future if the bitcoin sending and receiving addresses have not changed.¹⁴⁸ The beneficiary must also take care not to lose the transaction, or else the transfer will never take place.¹⁴⁹

Each of these gifting mechanisms has its advantages and drawbacks; bitcoin owners should consider which plan best suits their needs. Those who trust their intended beneficiaries may wish to avoid a third party's involvement and simply pass on the keys to their bitcoin wallets, whereas an M-of-N transaction would be the superior choice if the bitcoin owner does not wish the beneficiary to have immediate control over the bitcoins. Once a bitcoin owner has decided the best mechanism to transfer his or her bitcoins, the next decision is whether to distribute them by gift or devise.

3. *Gifting Bitcoins*

Gifting bitcoins is one viable option a bitcoin owner has to reduce tax liability and to transfer the value of the bitcoins during the owner's lifetime. To make an inter vivos gift of personal property, including virtual currency, the donor must intend to make a gift and must deliver possession of the property to the donee.¹⁵⁰ The donee must also accept the property.¹⁵¹

In the case of virtual currency, manual delivery is impossible, leaving an owner with the options of constructive delivery (e.g., by delivering keys) or symbolic delivery (e.g., by delivering a letter or deed).¹⁵² In the case of bitcoins, constructive delivery applies because the donor must give the donee virtual keys in order to access the gift.¹⁵³ The fact

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ See, e.g., *Murphy v. Killmurray*, 88 N.E.2d 544, 545 (Mass 1949); *In re Szabo's Estate*, 176 N.E.2d 395, 396 (N.Y. 1961).

¹⁵¹ See *In re Szabo's Estate*, 176 N.E.2d at 396.

¹⁵² See *Newman v. Bost*, 29 S.E. 848, 850 (N.C. 1898).

¹⁵³ *Frequently Asked Questions*, *supra* note 11.

that a bitcoin owner can give another party access to his or her wallet while maintaining personal access raises the interesting question of when delivery of the gift becomes complete. If a bitcoin owner simply gives the donee the keys to a bitcoin wallet but keeps a copy of the keys either for backup or so he can continue to have access to the bitcoins, then this is likely an incomplete gift.¹⁵⁴ Until the owner “has so parted with dominion and control as to leave him in no power to change the disposition, whether for his own benefit or the benefit of another,” it is not subject to taxation.¹⁵⁵ However, as with joint bank accounts, ownership is defined by each owner’s net contribution, and any withdrawal in excess of an individual’s contribution is considered a gift because the other owner no longer has control over that money.¹⁵⁶ Likewise, if a donor gifts bitcoins to someone by way of giving that person the bitcoin keys, the donee has no ownership in the bitcoins, and it does not become a gift until those bitcoins are removed from the account.¹⁵⁷

Generally, if it is an incomplete gift, then the owner has to be concerned that the intended gift will fall into the residuary estate.¹⁵⁸ However, it may be possible for a bitcoin owner to make a valid, present gift for a future, remainder interest.¹⁵⁹ In *Gruen v. Gruen*, a father gave his son a valuable painting as a present gift without immediately relinquishing the item.¹⁶⁰ Instead, the father maintained possession of the painting for the remainder of his life, and the son claimed the gift upon father’s death.¹⁶¹ Despite the lack of immediate delivery, the New York Court of Appeals found that the father had made a proper present gift for a future interest.¹⁶² The same principle the court applied in *Gruen* could apply to the disposition of bitcoins: an owner can make a future gift of a bitcoin wallet but can maintain possession of the keys for his own enjoyment until death. However, the analogy breaks down: unlike the painting in *Gruen*, in which the father simply maintained possession during his lifetime, maintaining possession of bitcoins for enjoyment until death would likely mean spending, investing, or otherwise obtaining value from them. Thus, a court could find that a gift of bitcoins is not complete until the donee takes possession.

¹⁵⁴ See Treas. Reg. § 25.2511-2(b).

¹⁵⁵ *Id.*

¹⁵⁶ See, e.g., ARIZ. REV. STAT. ANN § 14-6211(a) (2014); *Savig v. First Nat’l Bank of Omaha*, 781 N.W.2d 335, 340 (Minn. 2010).

¹⁵⁷ See *Gruen v. Gruen*, 496 N.E.2d 869, 874 (N.Y. 1986); Treas. Reg. § 25.2511-2(b).

¹⁵⁸ See *Gruen*, 496 N.E.2d at 872; § 25.2511-2(c).

¹⁵⁹ See *Gruen*, 496 N.E.2d at 872.

¹⁶⁰ See *id.* at 870-71.

¹⁶¹ See *id.* at 871.

¹⁶² See *id.* at 872.

Another use for inter vivos gifts is to transfer bitcoins to donees within the annual exclusion limit. Currently, the annual exclusion that applies to each donee is \$14,000, so a bitcoin owner with substantial bitcoin property could begin gifting bitcoins so the donee will not have to pay gift tax, and the estate tax will subsequently be lower.¹⁶³ When using the exclusion, the gift's value must be measured in accordance with the fair market value at the time of the gift, using the exchange rate.¹⁶⁴ Given bitcoins' exchange rate fluctuation, an owner trying to limit his estate liability could gift \$14,000 worth of bitcoins when they are at a lower exchange rate to still allow the donee to claim the annual exclusion, even if the bitcoins are worth double by the end of the year.¹⁶⁵ It will then be up to the donee to determine when to cash in or use the bitcoins – ideally when their value is high.

To avoid the problem of an intended donee having to prove the presence of a gift, an owner can establish an M-of-N transaction as an alternative.¹⁶⁶ The M-of-N key provides an effective and secure way to make a gift, allows the owner to divide up the sum of his bitcoins to multiple donees, and permits the owner to continue using the bitcoins as he wishes.¹⁶⁷ Though the M-of-N transaction itself is irrevocable, if the bitcoin owner no longer wishes to give away the bitcoins, he or she can simply change the sending address to re-route it back to himself through a virtual straw man.¹⁶⁸ Comparably to a ban on unilateral trusts, a bitcoin owner establishing M-of-N transactions cannot act as sole sender and receiver.¹⁶⁹

A variation on the M-of-N transaction that would allow a bitcoin owner to make a post-mortem gift is through a dead man's switch transaction,¹⁷⁰ which allows a bitcoin owner to schedule a post-mortem gift without having to involve a third party.

The benefits of gifting bitcoins are several. First, the bitcoin owner can control when to release the gift. Until then, the gift remains securely stored in the bitcoin wallet.¹⁷¹ Second, it provides for a proper transfer of the ever-important keys.¹⁷² Donees will then be taxed on the value of the gift at the time of receipt. While gifts are one way to plan ahead for

¹⁶³ I.R.C. § 2503(b); Rev. Proc. 2013-35, 2013-47 I.R.B. 537.

¹⁶⁴ I.R.C. § 2512(a).

¹⁶⁵ *Market Price (USD)*, *supra* note 102.

¹⁶⁶ See Part III.B.2.b, *supra*, for an explanation of M-of-N transactions.

¹⁶⁷ Parker, *supra* note 135.

¹⁶⁸ See Eli Dourado, *Stop Saying Bitcoin Transactions Aren't Reversible*, ELIDOURADO.COM (Dec. 12, 2013), <https://elidourado.com/blog/bitcoin-arbitration/>.

¹⁶⁹ See *id.*

¹⁷⁰ See Part III.B.2.c, *supra*, for an explanation of dead man's switch transactions.

¹⁷¹ See Parker, *supra* note 135.

¹⁷² See *id.*

the disposition of bitcoins, another is to devise an owner's bitcoins by will or trust.

4. *Devising Bitcoins*

Devising bitcoins by will or by trust is another viable option to ensure that an owner's bitcoins are not lost and do not become permanently dormant. First and foremost, a bitcoin owner is advised to keep very thorough and accurate records to prevent a loss of bitcoin keys. A bitcoin owner should then choose a method of transfer he is comfortable with, both in terms of the method's security and finality. If the bitcoins are placed into a trust, the owner will need to turn over the bitcoin keys to the trustee for safe keeping and should instruct the trustee on how to use them. If a bitcoin owner has minor children, he is advised to designate conservators to manage the bitcoins and the bitcoin keys until the children are mature.

As of this writing, there do not appear to be any legal barriers to devising an interest in a mining pool. An interest in a mining pool would most likely be valued by the present value of future cash flows, as with any other business interest. Unlike other business interests, however, interest in a mining pool does not have traditional assets and liabilities, making it nearly impossible to predict a future rate of return, and in turn making it nearly impossible to determine the business interest's value.

One final consideration for the mindful bitcoin donor concerns ademption. What happens to an adeemed gift depends on whether it is a general or specific devise.¹⁷³ When a general gift is adeemed, the value of that gift is paid out of the general assets of the estate, but when a specific gift is adeemed, the gift fails.¹⁷⁴ Bitcoins pose an interesting question in this regard because they are, first and foremost, a virtual currency, which may suggest that a gift of bitcoins is a general devise. Under the new guidelines, however, the I.R.S. considers bitcoins property for tax purposes;¹⁷⁵ this classification may support a finding that a gift of bitcoins is a specific devise, and thus, if a devise of bitcoins is adeemed, the gift will fail. Therefore, a bitcoin owner will want to be aware of the impact of the I.R.S. Notice 2014-21 in order to make sure his or her property is devised as intended.

IV. CONCLUSION

Bitcoins and other virtual currencies rely on technology and individual use for their value. They add a new layer of complexity to estate

¹⁷³ See, e.g., *In re Estate of Wales*, 727 P.2d 536, 536-37 (Mont. 1986).

¹⁷⁴ See *id.* at 537.

¹⁷⁵ I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

planning and taxation, and the prudent estate planner should treat bitcoins as legitimate property with real value. Given the complexity of the process of mining for bitcoins and the fact that bitcoins are stored in special wallets, trusting bitcoins to be distributed through intestacy will not suffice. Even assuming a decedent's loved ones know that he or she owned bitcoins, there is no guarantee that they will have the keys to access them; this risks losing the bitcoins entirely. Rather than merely hoping that intended beneficiaries will know of the bitcoins' existence, how to access them, and what to do with them, bitcoin owners should be proactive and develop a coherent estate plan that considers the relationship between the bitcoin owner and intended beneficiary, retains the bitcoin owner's desired flexibility during life, and provides adequate security for the bitcoin owner's peace of mind.

Beyond these factors, the prudent estate planner should also consider the impact of I.R.S. Notice 2014-21. The decision to treat bitcoins as property, not currency, has two primary implications for bitcoin owners. First, treating bitcoins as property means that they will be subject to capital gains taxes. Second, bitcoin owners must be sure to keep impeccable records so that their devisees will have the proper tax basis for bitcoins received.

Even if bitcoins do not become the universally-used currency Bitcoin proponents hope for, there is enough value invested in bitcoins to make their inclusion in estate planning more than an interesting hypothetical. Estate planners should be sure to inquire about whether their clients own bitcoins and, if they do, work to develop a plan that ensures these valuable assets will not be lost.

