A PRIMER ON VIRTUAL CURRENCY

BY KEN MARTIN, ESQUIRE | GADSDEN, SCHNEIDER & WOODWARD, LLP

Virtual currencies (also known as "cryptocurrencies") have become increasingly common as a way to shop online and as a vehicle for investment.[1] According to the IRS, as of 2018 there were over 1,500 known virtual currencies, and other sources put the number over 2,700 as of 2019.[2] Bitcoin, the first and most famous virtual currency, was launched in 2009, and, as of January of 2020, has grown to a market capitalization of $156 billion (up from $125 billion a year earlier).[3] Since its launch in 2015, Ethereum, the second most popular virtual currency, has grown to a market capitalization of more than $17 billion as of January 2020.[4] A 2016 report from the Boston Federal Reserve estimated that there were approximately 2.8 million Americans who owned virtual currency.[5] For these reasons, the odds of having a client with virtual currency are nontrivial and rising.

The IRS defines virtual currency as a "digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value."[6] Although the IRS is "aware" that virtual currency can be used to buy goods and services and operate like "real" currency, it is not treated as money because it is legal tender in no jurisdiction.[7] Likewise, in Pennsylvania "money" generally means "lawful money of the United States," and Pennsylvania's U.C.C. defines "money" as "a medium of exchange currently authorized or adopted by a domestic or foreign government."[8] Pennsylvania's Money Transmitter Act includes a seemingly broader definition of "money" – "currency or legal tender or any other product that is generally recognized as a medium of exchange" – that nevertheless does not include virtual currency.[9]

Whether a virtual currency is "convertible" is an important distinction. Convertible virtual currency is that which has an equivalent value in real currency.[10] For example, Bitcoin is a convertible virtual currency because it can exchanged for fiat currency such as dollars and euros on exchanges such as Coinbase.[11] For federal income tax purposes, convertible virtual currency is treated as property.[12] In particular, convertible virtual currency is included in a taxpayer's gross income at the fair market value upon the date is was received.[13] Fair market value will be the value the currency has on an exchange the rates of which are determined by supply and demand.[14] A taxpayer's basis in virtual currency is the amount included in his or her gross income.[15]

The uncertainty of exchange rates make it difficult to determine the fair market value of a convertible virtual currency.[16] Taking Bitcoin as an example, the exchanges that determine its value run non-stop all day, every day around the world.[17] These exchanges lack the so-called "circuit breakers" to control major price swings that stock markets have, and Bitcoin has in fact suffered several large price swings in its history.[18] In March of this year, Bitcoin price volatility reached its highest level since January 2014 with the price dropping about 58% in five days from $9,204.67 on March 7 to $3,867.06 on March 12.[19] To further muddy the waters, different exchanges can offer different real currency values for the same virtual currency at the same time because the values are determined by the activity on the particular exchange.[20]

Many virtual currencies, such as Bitcoin, run on a technology called "blockchain," which has advantages but also presents further complications. A blockchain is a distributed ledger – essentially a large database spread across a decentralized (peer-to-peer) network of computers ("nodes") as multiple copies of separate "blocks" of data linked together in a chain structure.[21] Transactions are recorded and time-stamped in the blocks and verified by the use of public-key cryptography.[22] For

continued on page 18

Bitcoin, each user has a public key, which serves as his or her "address" from or to which his or her bitcoins are sent and received.[23] The blocks are constantly updated and verified by the network, which assures the authenticity of transactions and prevents double-spending the currency.[24] "Miners" are nodes that perform the necessary computations to add and verify transactions in the network and are rewarded with some of the virtual currency (generically called "coins") for doing so.[25]

Occasionally, the protocols for adding blocks to the blockchain are altered, which results in a "fork," which may be "soft" or "hard." A soft fork occurs if the new protocols are backwards compatible with the original ones, whereas a hard fork essentially creates a new blockchain that shares its history with the original one, but is thereafter incompatible and independent.[26] Sometimes a hard fork is accompanied by an "airdrop," which is the pro rata issuance of coins of the new currency to holders of the original currency.[27]

The IRS's stance on mining and airdrops is consistent with its view of virtual currency as property. When virtual currency is awarded for mining, the fair market value as of the date of receipt of the coins is includable in gross income.[28] A hard fork by itself (without an airdrop) does not incur any taxable income because nothing is received; however, a hard fork accompanied by an airdrop is includable in gross income to the extent of the fair market value of the coins received as of the date that the recipient has access to them.[29]

A common misconception about virtual currency in general, and Bitcoin in particular, is that its transactions are anonymous.[30] Although some virtual currencies are anonymous, Bitcoin and others can be traced by the pseudonymous user addresses, which themselves can often be traced back to an individual person.[31] Nevertheless, tracing the addresses to the users can be difficult, and for this reason the IRS has described virtual currencies as "pseudo-anonymous."[32] Concerned that taxpayers were not reporting or were underreporting virtual currency income, the IRS began a "Virtual Currency Compliance campaign" in 2018, and began sending "educational letters" to thousands of taxpayers in the summer of 2019.[33]

In the context of probate, attorneys may face challenges determining if a decedent had any virtual currency.[34] Virtual currency is held in digital "wallets," which can be computer software, a smartphone app, or an online service, that hold owners' private keys, facilitate the transfer of coins, and record transaction history.[35] In addition, virtual currencies can be held in "cold storage," which is an offline means of storing a private key, such as on a hard drive or USB flash drive.[36] Discovering virtual currency owned by a decedent therefore requires information about where a decedent maintained his or her wallet(s), the user names and passwords for accessing the wallets, and whether there are any portable media laying around that could be holding coins in cold storage. Without such information, virtual currency is lost forever.[37] Digital wallets managed by an online service have the additional hurdle of coaxing the service provider to allow a personal representative access to the decedent's account, which they are sometimes reluctant to do.[38]

In sum, virtual currency presents many opportunities, and its value and prevalence continues to grow. It is only natural that it will receive more governmental scrutiny and become a larger part of estate planning in the future.

continued on page 19

VIRTUAL CURRENCIES, NOTES

1 *See* Patrick L. Young, *Tax Strategies for Virtual Currency*, AICPA, https://www.thetaxadviser.com/issues/2020/ mar/tax-strategies-virtual-currency.html (last visited May 31, 2020).

2 *See* I.R.S. News Release 2018-71 (March 23, 2018); see Julie Colton, *Cryptocurrency: The Naturally Hidden Asset*, 21 Lawyers J., 14 (2019).

3 *See Top Cryptocurrencies in 2020 List*, Business Insider (Jan. 16, 2020), https://www.businessinsider.com/top-cryptocurrencies?op=1 (last visited May 31, 2020); *see* Nathan Reiff, *Top 5 Cryptocurrencies by Market Cap*, Investopedia (Jun. 25, 2019), https://www.investopedia.com/news/top-5-cryptocurrencies-market-cap/ (last visited May 31, 2020).

4 *Top Cryptocurrencies in 2020 List*, *supra*.

5 Hilman and Rauchs. *Global Cryptocurrency Benchmarking Study*, p. 27. Cambridge Center for Alternative Finance, 2017. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternativefinance/ downloads/2017-global-cryptocurrency-benchmarking-study.pdf

6 I.R.S. Notice 2014-21, 2014-1 C.B. 938. This definition is used elsewhere by the federal government too. *E.g.*, In re Coinflip, 2015 CFTC LEXIS 20, *3, fn. 2 (Commodity Futures Trading Comm'n Sept. 17, 2015) (quoting Notice 2014-21 without citation).

7 *See* I.R.S. Notice 2014-21, 2014-1 C.B. 938; *see also* I.R.S. Chief Counsel Notice CC-2020-003 (Oct. 22, 2019), 2019 CCN Lexis 9.

8 *See* 1 Pa. C.S. § 1991; *see* 13 Pa. C.S. §1201(b)(24).

9 *See* 7 P.S. § 6101; *see Money Transmitter Act Guidance for Virtual Currency Business*, Pa. Dept. of Banking and Securities, https://www.dobs.pa.gov/Documents/Securities%20Resources/MTA%20Guidance%20for%20Virtual%20Currency%20Businesses.pdf (last visited May 31, 2020), 1.

10 I.R.S. Notice 2014-21, 2014-1 C.B. 938.

11 See *id.*

12 *Id.*

13 *Id.*

14 *Id.*

15 *Id.*

16 Patrick L. Young, *supra*.

17 Shobhit Seth, *Bitcoin: Biggest Price Swings Happen on Weekends*, Investopedia (Jun. 15, 2018), https://www.investopedia.com/news/bitcoin-biggest-price-swings-happen-weekends/ (last visited May 31, 2020).

18 *See id.*; *see generally*, John Edwards, *Bitcoin's Price History*, Investopedia (Apr. 11, 2020), https://www.investopedia.com/articles/forex/121815/bitcoins-price-history.asp (last visited May 31, 2020).

19 Charles Bovaird, *Bitcoin Volatility Reached A 6-Year High In March*, Forbes (Apr. 8, 2020), https://www.forbes.com/sites/cbovaird/2020/04/08/bitcoin-volatility-reached-a-6-year-high-in-march/#43166cb0ac21 (last visited May 31, 2020).

20 Bob Pisani and Todd Haselton, *Here's Why Bitcoin Prices Are Different on Each Exchange*, CNBC (Dec. 12, 2017), https://www.cnbc.com/2017/12/12/why-bitcoin-prices-are-different-on-each-exchange.html (last visited May 31, 2020).

21 Livia K. DeMarchis and Catherine A. Burke, *Blockchain Basics for Estate Planning, Estates, Gifts & Trusts Journal*, Bloomberg BNA, March 12, 2020. The linking is accomplished by a subsequent block containing the cryptographic hash of the preceding block.

22 Jerry Brito and Andrea Castillo, *Bitcoin: A Primer for Policymakers*, Mercatus Center at George Mason University (2013), http://mercatus.org/sites/default/files/Brito_BitcoinPrimer.pdf (last visited Jun. 1, 2020), p. 5.

23 *Id.*, p. 8.

24 *Id.*

25 *See id.*; *see* DeMarchis and Burke, *supra.*

26 *See* Rev. Rul. 2019-24, 2019-44 I.R.B. 1004; *see* Bisade Asolo, *Blockchain Sot Fork & Hard Fork Explained, Mycryptopedia* (Nov. 1, 2018), https://www.mycryptopedia.com/hard-fork-soft-fork-explained/ (last visited Jun. 1, 2020)

continued on page 20

VIRTUAL CURRENCIES, NOTES

27 *See* Rev. Rul. 2019-24, 2019-44 I.R.B. 1004. The airdrop may be used to encourage adoption of the new currency and deprecation of the original one.

28 I.R.S. Notice 2014-21, 2014-1 C.B. 938.

29 Rev. Rul. 2019-24, 2019-44 I.R.B. 1004. The recipient does not necessarily have access to the new currency upon its entry in the new blockchain. For example, there may be a delay if the recipient's holdings are managed through a third party.

30 *See* Brito and Castillo, *supra.*, pp. 7-8.

31 *Id.*, p. 7. An example of an anonymous virtual currency is Monero.

32 I.R.S. News Release 2018-71 (Mar. 23, 2018).

33 I.R.S. News Release 2019-132 (Jul. 26, 2019).

34 *See* DeMarchis and Burke, supra.; *cf.* Julie Colton, *supra.*, 14 (discussing the difficulties of discovering virtual currency in a family law context).

35 *See* DeMarchis and Burke, supra.; *see* Julie Colton, *supra.,* 14.

36 DeMarchis and Burke, *supra.*; Lily Hay Newman, *How to Keep Your Bitcoin Safe and Secure,* Wired (Nov. 5, 2017), https://www.wired.com/story/how-to-keep-bitcoin-safe-and-secure/ (last visited Jun. 1, 2020).

37 DeMarchis and Burke, *supra.*

38 *Id.*