

## Need an Accounting/Finance Expert in Cryptocurrency?

D. Larry Crumbley, Ph.D., CPA, CFF, CRFAC, MAFF

Caleb Blair\*

Cryptocurrency is a digital token that can be sent electronically from one entity to another, almost anywhere in the world. No single entity or company controls the cryptocurrency networks (such as bitcoins), but a decentralized network of computers keep track of the currency by a wallet ID. In effect, the blockchain technology records, verifies, and stores transactions without a trusted central authority. This transparent blockchain technology is a ledger that maintains a continuously growing list of transactions in real time, called blocks.<sup>1</sup>

### Background

Using bitcoins as an example, the wallet IDs allows buyers and sellers to remain anonymous. With no central authority, no one has the authority to force new users to reveal their identities currently. On June 26, 2017, there was a crash of about 20 percent of all cryptocurrencies. Again on September 17, 2017, China closed local cryptocurrency exchanges, and the market crashed below \$3,000. Other countries may attempt such actions, and in the U.S. the DOJ filed a “John Doe” summons in November 2016 on the Coinbase exchange requesting identities and full transaction records of their customers transferring virtual currency between December 13, 2013 to December 31, 2015. After the government narrowed the scope of the summons, Coinbase indicated that the requested information included more than 8.9 million transactions and 14,355 account holders [U.S. v. Coinbase, Inc, N.D. Calif.]. Some nonprofits have presented amicus briefs opposing the “overbroad subpoenas.” Of millions of transactions, only 802 people informed the IRS about their Coinbase profits. These future events may cause cryptocurrencies to drop, and needless to say, cryptocurrencies are volatile.

There are a number of cryptocurrencies, including Bitcoins, Ethereum, Ethereum classic, Litecoin, Nem, Dash, Iota, Bitshares, Monero, Neo, Ripple, and more. Apparently, the supply of bitcoins is mathematically limited to 21 million bitcoins that cannot be changed. There are around 50 bitcoin exchanges with at least 25 in the U.S. Mt. Gox, the largest exchange, filed for bankruptcy in February 2014. Supposedly around 3 to 6 million people and entities use them, but in April 2017, the SEC refused to list a bitcoin ETF. There are companies offering Bitcoin IRA Investing, after the IRS labeled

---

\*Professor Crumbley is Emeritus Professor at Louisiana State University where he still teaches Forensic Accounting and Petroleum Accounting ([dcrumbl@lsu.edu](mailto:dcrumbl@lsu.edu)). Caleb Blair is a student at Texas A&M University.

<sup>1</sup>Nathaniel Popper, “What is Bitcoin? All About the Mysterious Digital Currency,” *The New York Times*, May 15, 2017, <https://www.nytimes.com/2017/05/15/business/all-about-bitcoin-the-mysterious-digital-currency.html?mcubz=0>. For more detail, see D. L. Crumbley et al., Cryptocurrencies are taxable and not free from fraud, *Tax Notes*, Vol. 158, January 8, 2018, 225-233.

cryptocurrencies property in IRS Notice 2014-21. But there are obstacles.<sup>2</sup> Coindesk.com, CryptoCompare, and CryptoCurrency Market Capitalizations are some websites providing up-to-date pricing of the numerous cryptocurrencies.

Miners use special computers to mine bitcoins by solving mathematical puzzles with raw computational power, and the winners receive newly-created bitcoin rewards. A bitcoin rig can be purchased, but the calculation process requires a huge amount of power (electricity), especially for cooling the computers. Chinese miners in the past have performed a great deal of the mining because of cheap power, along with Iceland. With China's ban on initial coin offerings (ICO), others will have to do the mining. How do you hide a warehouse of computers? Unless a person commands a tremendous hashrate, the odds of solo-mining and solving a block by yourself are extremely low. Thus, miners band together in pools to increase the hashrate.<sup>3</sup>

As the amount that can be mined approaches the 21 million limit, rewards to miners decrease. The number of rewards is reduced by a process of halving, which occurs about every four years (or every 210,000 blocks until the 21 million limit is reached. The next halving occurs in 2020, dropping rewards from 12 to six coins, and there is a Bitcoin Block Reward Halving Countdown website. On September 15, 2017, 78.9% of total bitcoins had been mined.

### **Companies Accepting Bitcoins**

BitPay, with six locations, is one of the largest bitcoin exchanges with 30,000 merchants globally, processing \$1 million in bitcoin transactions daily. Overstock is signed up with rival exchange Coinbase, which also boasts around 30,000 business customers.<sup>4</sup> Coinbase shifted to a so-called on-chain transaction fees after March 21, 2017 to users.

There are long lists of companies accepting bitcoins, such as Overstock, Microsoft, Dell, Time, Inc., Reddit, PayPal, Target, Subway, Zappos, Expedia, Sacramento Kings, 50 Cent, and more. Coinbase indicates they support 32 countries and serve 10.3 million customers.

The bitcoin partners make money on the transaction fee (around 1%). In reality, the large companies have a bitcoin processing partner (e.g., Coinbase, BitPay), and the companies ask for the bitcoins to be instantly converted to cash. For example, Overstock keeps 90% of their bitcoin transaction revenue in U.S. dollars. Possible reasons for companies favoring dollars are that they do their accounting and finance in dollars.<sup>5</sup>

### **Currency or Property?**

---

<sup>2</sup> Scott Dylan, "How to Hold Bitcoin in an IRA and why it's still not easy," *Bitcoin Magazine*, May 29, 2017, <https://bitcoinmagazine.com/articles/how-hold-bitcoin-ira-and-why-its-still-not-easy/>.

<sup>3</sup> "Will 2017 be Profitable for Bitcoin Mining?" <https://www.bitcoinmining.com/is-bitcoin-mining-profitable-in-2017/>

<sup>4</sup> Gilly Wright, "Is Bitcoin Good for Business?" *Global Finance*, June 2014, pp. 16-19.

<sup>5</sup> Jacob Davidson, "[No, Big Companies Aren't Really Accepting Bitcoins](#)," *Money*, January 9, 2015.

The Bank Secrecy Act (BSA) requires financial institutions to collect and maintain information about their customers and share that information with the Financial Crimes Enforcement Agency (FinCEN), which is a part of the Treasury Department. When do business dealings with cryptocurrencies fall within the definition of “financial institution?” For example, are BSA obligations triggered when the developer of a new cryptocurrency (or token) sells it to a U.S. person?<sup>6</sup> Do these sales fit into the definition of “money transmission” under federal surveillance regulations? How can sales to U.S. citizens avoid BSA rules? FinCEN has said that selling your own bitcoins from your account is not a money transmission.

In a settlement agreement with Ripple in 2015, FinCEN said that selling a token you own is a money transmission. Thus, to do so without registering with FinCEN is a serious offense.<sup>7</sup> IRS Notice 2014-21 (March 25, 2014) treats payments using cryptocurrency as income, like any other in-kind payment. Income realized from all cryptocurrency transactions are treated as a capital gain/loss. In *SEC v. Shavers*, 416 WL 4028182 (E.D. Tex. August 6, 2013), the Court treated bitcoins as a currency or form of money. FBI seized about \$80 million of bitcoins from Trenton Shavers. The Shavers’ judge used the three part *Howey* test to decide that the bitcoins were investment contract under the securities regulations laws (re the Ponzi scheme). See *SEC v. W.J. Howey Co.*, 328 U.S. 293 (1946).

## **U.S. Tax Treatment**

Virtual currency is treated as property for tax purposes, and it does not have legal tender status. Thus, wages using virtual currency are taxable to the employee, must be reported by an employer on a Form W-2, and are subject to federal income tax withholding and payroll taxes. Payments using virtual currency made to independent contractors and other service providers are taxable and self-employment tax rules generally apply. Normally, payers must issue a Form 1099.

The character of gain or loss from the sale or exchange of virtual currency depends on whether the virtual currency is a capital asset in the hands of the taxpayer (e.g., long or short-term). A payment made using virtual currency is subject to information reporting to the same extent as any other payment made in property.

## **Future of Cryptocurrencies**

The fact that a person must determine a gain or loss on each transaction can be a real problem in the U.S. for cryptocurrencies (if the IRS wins its battle with Coinbase). Imagine the difficulty of taxpayers keeping track of every gain or loss on each transaction if they use digital money like cash, credit cards, or checks. Soon virtual currency would be used only for large purchases or sales.<sup>8</sup> Or cryptocurrencies will move to the Dark Web or the underground economy. So be careful with statement that fiat currency is dead and the days of coin and paper money are over. Governments may try to

---

<sup>6</sup> P.V. Valkenburgh, “[Securities Laws Aren’t the Only Rules Tokens Sales Have to Consider](#),” *Coindesk*, May 20, 2017.

<sup>7</sup> P.V. Valkenburgh, “[Securities Laws Aren’t the Only Rules Tokens Sales Have to Consider](#),” *Coindesk*, May 20, 2017.

<sup>8</sup> J.M. Tyra, “What if I Don’t Report my Bitcoin income?,” *Bitcoin Magazine*, February 3, 2014, <https://bitcoinmagazine.com/articles/dont-report-bitcoin-income-1391481006/>.

outlaw cryptocurrencies like Bangladesh, Bolivia, Ecuador, and Kyrgyzstan. Other countries have restricted it or not officially permitted it. Watch the outcome in China and India.

In March 2013, the Department of the Treasury's Financial Crimes Enforcement Network (FinCEN) issued guidance that clarified which participants in virtual currency systems are subject to anti-money laundering requirements and required virtual current exchanges to register with FinCEN. In July 2013, the Securities and Exchange Commission (SEC) charged an individual and his company with defrauding investors through a bitcoin-based investment scheme. In October 2013, multiple agencies worked together to shut down Silk Road (an online marketplace) where users paid for illegal goods and services with bitcoins.

### **Problems with Digital Currencies**

Digital currencies can be lost, stolen, or hacked. A British man threw a hard drive containing 7,500 bitcoins into the trash. The IT worker had mined the virtual currency four years earlier when the bitcoin business was in the domain of tech geeks. At \$3,500 times 7,500, the loss was worth \$26 million in September 2017. Jared Kenna lost around \$200,000 when he re-formatted his hard drive (800 bitcoins), erasing the coins. He also lost millions from a hacker who changed his password to get to his bitcoins.<sup>9</sup> In the U.S., such types of losses could be capital losses or casualty losses, depending upon the circumstances. There are a number of devices for sale to protect digital currencies, but keep hardware wallets in a safe deposit box.

### **Accounting for Bitcoins**

There is also the "malleability bug and the segregated witness." The malleability bug involves the second part of a bitcoin transaction – the witness which proves the owner really wanted to spend the bitcoin. Essentially, Aaron van Wirdum says bitcoin signatures can be slightly changed by anyone, even after the signature is created and without invalidating the signature. The appearance and the transaction identifier can be altered, making it harder to build second-layer protocols on top of bitcoins. Supposedly, a SegWit protocol has been activated on bitcoin in August 2017.<sup>10</sup> Marty Zigman suggests three accounting methods for cryptocurrencies.<sup>11</sup> Initially, define a new payment method in the accounting software, relate it to the bank account that the fund will settle, and then follow the procedures that the bitcoin providers (e.g., BitPay or Coinbase) prescribe for accepting bitcoins in the business. Second, if the volatility stabilizes and they become more widely accepted, treat as foreign currency. In the future, possibly treat digital currencies as the base currency.

---

<sup>9</sup> Virginia Harrison, "[Bitcoins worth \\$9M buried in garbage dump](#)," *CNN Money*, November 29, 2013.

<sup>10</sup> Aaron van Wirdum, "The Long Road to SegWit: How Bitcoin's Biggest Protocol Upgrade Became Reality," *Bitcoin Magazine*, August 31, 2017, <https://bitcoinmagazine.com/articles/long-road-segwit-how-bitcoins-biggest-protocol-upgrade-became-reality/>.

<sup>11</sup> Marty Zigman, "[Three Methods for Simple Bitcoin Business Accounting](#)," *Bitcoin Magazine*, March 31, 2015.

Note: Information about cryptocurrencies changes rapidly. Rely on this information only as background and always consult an adviser. This information is not personalized investment, legal, or tax advice.