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What You Need to Think About Before Investing in Bitcoin and Other Cryptocurrencies

Abstract

Since lots of techies got excited about Bitcoin and began to both use and accept it as an alternative form of money, we need to evaluate its suitability as money to determine if it is likely to have lasting value.

Keywords

investments, Bitcoin, money, value, exchange

Disciplines

Business | E-Commerce

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What you need to think about before investing in Bitcoin and other Cryptocurrencies

Everyone is talking about Bitcoin, a pioneer in the world of digital or cryptocurrencies. Originally created in 2009 by someone using the pseudonym Satoshi Nakamoto, its value has skyrocketed in part because the “mining” of Bitcoins requires massive computer power to solve increasingly complex mathematics problems.

Since lots of techies got excited about Bitcoin and began to both use and accept it as an alternative form of money, we need to evaluate its suitability as money to determine if it is likely to have lasting value. Money typically performs three functions, serving as a medium of exchange, a unit of account, and a store of value.

Before evaluating Bitcoin, however, we should note that it is much more than a currency. It is a fantastic story in an age when stories can travel around the world at lightning speed. The story includes a man who bought two pizzas for 10,000 bitcoins in 2010, a sum that would have been worth \$200,000,000 when the cryptocurrency peaked in value toward the end of 2017. James Howells, a British IT specialist is also legendary because he had the misfortune of losing 7,500 Bitcoin after a hard drive with his access key was accidentally thrown away. Another thread of the story, believed by some Bitcoin investors, is that the approximately 1 million Bitcoins originally mined by its illusive founder have also been lost.

Beyond these stories, people like Bitcoin because its supply is ultimately limited to 21,000,000 coins, and because it is rooted in a technology known as Blockchain, which supposedly does not require safeguarding by banks, people or governments, making it less susceptible to mismanagement. People also claim it has the potential to provide essentially costless financial transactions. But before we can examine its suitability as money, and these additional arguments, we need to note that the value of money is not like the value of other things. When people buy food or cars (for example), they are using them up and will continue to buy new products over time. Demand is driven by both needs and consumption. In contrast, people do not use up money, so its value depends on limiting its supply to the amount that is needed for the spending that people plan on doing (which for money that portends to be international - like Bitcoin, is related to the rate that global GDP is increasing). If the supply of money grows much beyond this it will lose value.

We will start on a positive note by observing that Bitcoin appears to have been a remarkable store of value for the people who have held it, or managed not to lose it since 2009, as the pizza and hard drive stories make painfully clear. This is especially true for people living in countries where governments have debased the currency or otherwise stolen their citizens savings. But this is not to say it is the kind of store-of-value that we usually expect from money. Its value fluctuates widely, and it has lost over 50% of its value in a single day numerous times, which is not what people are usually looking for in their money. It's security features also make it complex to access. Wallets are protected cryptographically with two “keys,” extremely long strings of numbers and letters. When you want to receive bitcoin, you give out a “public” key. When you want to take money out of your wallet, you need the “private” key. You could, of course, write your keys on a piece of paper or

put them on a memory stick, but most of us know how well that kind of security works! So it is no surprise that one firm that tracks bitcoin movement world-wide estimates that as much as 23% of global Bitcoin holders can no longer access their balances because they have effectively lost the complex cryptographic keys needed to open their “wallets.”

In spite of these kinds of supply limitations, we need to expose one of the major risks associated with cryptocurrencies. Bitcoin was created primarily with open-source software, so even though the number of Bitcoins is limited, there is nothing to keep other programmers from creating Bitcoin substitutes, something that is currently happening at a very rapid clip. There are now more than a thousand different cryptocurrencies, including scores with valuations well over a billion dollars. So anyone who becomes fearful that Bitcoin has become overvalued has many other medium-of-exchange and store-of-value choices when she sells Bitcoin (including traditional currencies like dollars, yen, yuan or euros). In finance, we would say that the market for Bitcoin is very illiquid, or thin, because there is very little to stop large numbers of people from dumping their bitcoin (if, for example, they are convinced by and widely share articles like this one). Remember, like paper money, Bitcoins have no intrinsic value, so even small amounts of selling when no one wants to buy can cause major drops in the price, and this will accelerate when others see the value dropping.

Bitcoin is also not a good medium of exchange because “good” money must be widely acceptable and easy-to-use, which Bitcoin is not. Not only is it not exchangeable for goods and services in most places, but it sometimes takes hours or even days to exchange. Although it is true that some processing services accepting Bitcoin payments for retailers charge fees as low as 1% (compared with the 2% fee typically charged by credit-card companies), the Bitcoin system itself charges an additional fee. Although this fee may be only a few cents per transaction, when supply outstrips demand, a user can find charges as much as \$20 or more tacked on by her “wallet” provider. Bitcoin’s fluctuating value also makes it a poor unit of account, since if stores were to price things in Bitcoin they would have to change their prices minute by minute. Good money should also be efficient to produce, but “mining” a single Bitcoin already costs thousands of dollars even in areas where electricity is cheap. Mining difficulties also mean their supply cannot be temporarily flexed to match economic activity or prevent panics.

The other half of the Bitcoin equation involves whether demand is destined to drop. Demand can and will drop under a variety of scenarios. Already some prominent money managers are declaring Bitcoin investments off limits because of the speculative frenzy. And governments, of course, have the power to make these forms of money illegal, which, since cryptocurrencies are a favored form of payment for those engaged in extralegal and illegal activities, is already on their radar screen. In fact, cybercriminals and mobsters are already abandoning Bitcoin for other more secretive cryptocurrencies. This can only increase when governments figure out that it will be impossible to stop many types of crime unless they find a way to outlaw or penalize the use of these currencies.

Few people realize that the average investor in Bitcoin owns less than one Bitcoin. So Bitcoin holders are primarily wealthy technology types for whom it is viewed as “play money” and lots of small follower investors who see it as an easy way to get rich. A significant percentage of Bitcoins is owned by a small group of early “investors,” whereas 75% of Bitcoin addresses (mostly those late to the game) own an average of less than 1/10 of a Bitcoin each. Bitcoin is also a favorite of criminals, since there is no requirement to have an identity attached to a transaction.

Unfortunately, this combination evokes memories of other manias and ponzi schemes throughout the centuries, which typically involved the following six steps:

1. Insiders produce or buy something, ostensibly of value (in this case these new forms of money).
2. They come up with a scheme to get other people interested in buying it (in this case internet euphoria and FOMO fear of missing out).
3. The price is driven up by these new sources of demand.
4. Unless there is inherent value in what is being exchanged, the scheme runs its course and the price starts to drop.
5. The opportunists get out very quickly, and the price drops rapidly.
6. Large numbers of people (and especially those who got in late) suffer significant losses.

Bitcoin has clearly made it to Step 3, but the host of other coin offerings that are not far behind it are probably more useful for illustrating the irrational exuberance that has infiltrated the market. For example, a young man from Cedar Rapids, now living in Hong Kong, founded a company called block.one. His company creates and auctions off two million tokens a day to buyers who are willing to sign a purchase agreement that says the tokens “do not have any rights, uses, purpose, attributes, functionalities or features.”

There are other issues of accountability and security that Bitcoin holders should be aware of. Since there is no deposit insurance with Bitcoins, investors must rely on the integrity of the blockchain, wallet and exchange software. But some Bitcoin exchanges and wallets have already been subject to hacking and theft, and Bitcoin balances are also vulnerable to email phishing schemes designed to fool people into giving up their private keys. In addition, some cryptocurrencies are the product of much less reliable software and less ethical people than others, and this difference is very hard for laymen to discover. History also gives little evidence that other Bitcoin users feel obligated to make the victims whole, or that governments will devote the kind of resources to go after fraudsters and counterfeiters that they do for citizens who use government-supplied currencies.

Having said all this, my gut feeling is that blockchain technologies will someday prove to be very useful for accounting, fraud reduction, financial payments, or digital rights authentication, but even if this is the case, they will be significantly regulated by governments and incorporated into existing accounting, banking or legal systems. If individual hackers can create cryptocurrencies, banks and governments are also capable of doing blockchain, and it is highly likely that these authorized uses currencies will either be legally sanctioned or preferred for some of the reasons cited above and because it is hard to imagine any government turning over important policy activities like money supply management to a handful of libertarian programmers. In the long run, then, it is unlikely that the purchasing power of any cryptocurrency will exceed its value as currency. This means money to be made on the new blockchain technology will be made primarily through investing in organizations capable of applying it toward useful ends, which includes selling it to banks and governments, rather than in the actual holding of cryptocurrencies. It would not be surprising if a handful of companies associated with cryptocurrencies profit handsomely from the development of a superior technology for “creating” or monitoring electronic money, but just like in other newly emerging tech areas, there will be dozens of others in the field that will fail and provide large negative returns for the “Apple,” “Microsoft,” or “Google” that emerges as a winner. So, in spite of what people want to believe about cryptocurrencies, there is probably still no such thing as a free lunch!