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BITCOIN AND OTHER CRYPTOCURRENCIES

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Many of our clients have expressed interest in or asked questions about Bitcoin and other cryptocurrencies. Consequently, we have developed this primer, which includes our position on investing in these currencies, as a resource for you. We have organized the discussion in a question and answer format so that you can quickly find and absorb the material that is important to you. We hope that you find it helpful and informative.

Contents

FIRST COMMAND
Get Squared Away

Does the Asset Management Solutions (AMS) Program have any exposure to Bitcoin?

Currently, AMS does not have any exposure to Bitcoin as a direct currency, nor to any company affiliated with Bitcoin. AMS does, however, have exposure to companies associated with the broader blockchain technology that makes cryptocurrencies possible, selected at the discretion of the active managers we have chosen through a rigorous due diligence process.

The blockchain technology underlying cryptocurrencies has greater applications to other types of products and services that, from our perspective, are more promising and investable. Some examples[1] would be:

- Asset management – trade processing and settlement
- Insurance – claims processing
- Secure sharing of medical data
- Music royalties tracking
- Cross-border payments
- Personal identify security
- Anti-money laundering tracking system
- Supply chain and logistics monitoring
- Elections – integrity in voting mechanisms
- Real estate transaction processing platform
- Smart contracts
- Wills and powers of attorney
- Digital SSN cards, birth certificates, wedding certificates, and death certificates

What is Bitcoin exactly?

Bitcoin is a virtual or digital asset that is "currency-like" but that is not issued by a Central Bank, like the U.S. Federal Reserve. This is very important because it poses a material regulatory risk more fully discussed below.

The system uses cryptography (the enciphering and deciphering of messages in secret code, or cipher) to create new units (a process overall called "mining"), to update a decentralized ledger (who owns what), and to verify transactions (who sold what to whom). Because of the "secret ciphers" that backstop these digital assets, they are called cryptocurrencies.

The secretive nature of the Bitcoin can be traced all the way back to its inception, in that the identity of the creator of Bitcoin has still never been officially verified. A whitepaper was written under the name Satoshi Nakamoto, which is believed to be a pseudonym, and several people have claimed to be Nakamoto without proof. The last official correspondence from the mysterious creator was in an email to another cryptocurrency developer which stated they had "moved on to other things."[2]

What is a cryptocurrency?

A cryptocurrency is a digital (or virtual) asset designed to work as a medium of exchange that uses cryptography to secure its transactions, to control the creation of additional units, and to verify the transfer of assets.

Bitcoin, created in 2009, was the first decentralized cryptocurrency. Since then, numerous cryptocurrencies have been created. Bitcoin and other cryptocurrencies use decentralized control as opposed to centralized electronic money/central banking systems. The decentralized control is related to the use of Bitcoin's ledger. This ledger is based on technology called "blockchain."

What is "blockchain" technology?

This gets very technical, so we apologize beforehand. We have tried to simplify this as much as possible without losing meaning.

The blockchain is a public ledger that records Bitcoin and other cryptocurrency transactions. The software is "distributed," meaning that it exists on many different networks around the globe. In essence, this open-source software running on multiple networks cuts out the central banks from this digital monetary system, maintaining a "chain" of "blocks" that verify the ledger and transactions for Bitcoin. Each block is, in essence, a "copy" of the ledger. Every six minutes the ledger is updated by creating a new "block" that updates the old block for any new transactions that happened. The new block is added to the old block.

A transaction must be verified by six distinct computer networks before it is added to the newest block. The ledger which tracks the amount of Bitcoin and who owns it gets updated by adding new blocks to the old "chain of blocks" or the "blockchain". When a new blockchain is created, the software program alerts all networks running the software that the ledger has been updated. This allows Bitcoin software to determine when a particular Bitcoin amount has been spent, which is necessary to prevent double spending in an environment without central oversight (which is normally provided by a central bank).

It is interesting to note that the "blockchain," which is encrypted with a secret cipher, grows every six minutes, and requires increasing amounts of energy and computing power to survive.

How is a Bitcoin or other cryptocurrency created?

A Bitcoin or other cryptocurrency is created by digitally mining a new unit. If you run the Bitcoin software on your computer or computer network and allow it to use your computer when you are not using it, the Bitcoin software takes over your computer to help verify Bitcoin transactions and to help update and maintain the blockchain ledger. You get "paid" for this by getting credited with Bitcoin and receiving "transaction fees" for helping to verify transactions. Because of the computing power and energy needed to create just one Bitcoin and verify transactions, it is generally out of reach for most of us. As more Bitcoins get "mined", it takes even more computing power and energy to mine the next unit and it becomes increasingly difficult to verify the next transaction.

Most cryptocurrencies are designed to gradually decrease production of currency, placing an ultimate cap on the total amount of currency that will ever be in circulation. Think of it as being similar to the production of a finite supply of precious metals. Compared with ordinary currencies held by financial institutions or kept as cash on hand, cryptocurrencies can be more difficult for law enforcement to seize. There are currently over 18 million Bitcoins in existence and, as of March 31, 2021, they are trading at over $50,000 per Bitcoin. As mining a new Bitcoin becomes increasingly difficult (as designed into the software), the limit of 21 million Bitcoins will be reached at some point, which is still estimated to be about 20 years away. After all the Bitcoins have been mined, networks that run the verification procedures for transactions and that keep the blockchain ledger up to date will be rewarded solely by transaction fees.

Cryptocurrencies such as Bitcoin are pseudonymous, which means they are completely private, almost like an old Swiss bank account. Your identity is based on a secret cipher key that exists on the hard drive of your computer or iPad. If that is lost, you lose your

Bitcoin.[3] Stories abound of Bitcoin traders losing access to their fortunes simply by losing their passwords. One often-shared example is that of a Bitcoin holder named Stefan Thomas. Stefan lost the password to his IronKey, a USB hard drive that contained the digital wallet that held his Bitcoins, and which gives users just 10 password guesses before it encrypts its contents permanently. As of January this year, he had two guesses left, and over $300 million in value that was at risk of being lost forever. He is not the only one: Roughly 20% of the Bitcoin in existence is estimated to be either lost or stuck in locked digital wallets.[4]

How are Bitcoin, energy usage, and the environment connected?

The “blockchain” ledger, which is encrypted with a secret cipher, grows every six minutes, and requires increasing amounts of energy and computing power to survive. This is because it takes increasing amounts of energy for computers to mine new units, as well as verify transactions. The software was designed to do just this; however, an unintended result is an ever-increasing use of energy and a growing carbon footprint.

Given the secretive nature of Bitcoin, the magnitude of the exact amount of energy used in the mining process is unclear, although various academic studies have attempted to estimate this impact. The University of Cambridge Centre for Alternative Finance (CCAF), for example, calculated that Bitcoin's total annual energy consumption required roughly 130 terawatt hours (TWh) to process the approximately 160 quintillion calculations required in Bitcoin mining every second (or 160,000,000,000,000,000,000). For context, the United Kingdom’s total annual electricity consumption is slightly over 300 TWh, while the country of Argentina uses somewhere around the estimated amount cited for Bitcoin.[5]

For Bitcoin to be adopted as a global currency, "we'd have to double our global energy production," quipped Alex de Vries, the founder of the Digiconomist website. Worse still, he added, is that the trillions of calculations required to keep the Bitcoin system running are not really useful overall, as they are simply discarded immediately after processing to move on to the next calculations.[6]

Are cryptocurrencies legal?

The legal status of cryptocurrencies varies substantially from country to country and is still undefined or changing in many of them. While some countries have explicitly allowed their use and trade, others have banned or restricted it. Likewise, various government agencies, departments, and courts have classified Bitcoin differently.

As the popularity of and demand for online currencies has increased, however, so have policymakers’ concerns and scrutiny, particularly as it relates to criminal activity. Cryptocurrency networks display a marked lack of regulation that attracts many nefarious users who seek to evade taxes and launder money. Cryptocurrency transactions are independent from formal banking systems, and therefore can make tax evasion simpler for individuals. Since tracking taxable income is based upon what a recipient reports to the revenue service, it becomes extremely difficult to account for transactions made using existing cryptocurrencies, a mode of exchange that is complex and (in some cases) impossible to track.

Systems of anonymity that most cryptocurrencies offer can also serve as a

simpler means to launder money. Rather than laundering money through an intricate net of financial actors and offshore bank accounts, laundering money through cryptocurrencies can be achieved through anonymous transactions. Bitcoin and other cryptocurrencies have been used in online black markets such as "Silk Road", which at its peak provided a market for over 32,000 different types of drugs. When Silk Road was eventually shut down by the FBI in 2013, over 144,000 Bitcoins were seized, and its founder is now serving a lifetime sentence in prison without the possibility of parole.[7]

More recently, new rules were proposed in the U.S. that would create requirements for financial services firms to record the identifies of cryptocurrency users and subject them to broader anti-money laundering rules, which would limit their appeal to a large pool of its participants. Users whose "wallets" are now only identified through a string of code would instead have their true identify available to be tracked – and taxed (known as "whitelisting" of cryptocurrency accounts). Legislation is currently in a state of limbo, having been originally introduced by the Trump administration, which then fell to the Financial Crimes Enforcement Network (FinCEN) after the President lost his reelection bid, before ultimately being pushed to Treasury Secretary Janet Yellen. As for the former Federal Reserve Chair, she has exhibited reservations toward Bitcoin, noting that, "I don't think that Bitcoin - I've said this before - is widely used as a transaction mechanism. To the extent it's used, I fear it's often for illicit finance."

There is no currently published timetable for when an official decision will be made on exactly how or if regulation will be pursued, but when FinCEN published its initial rules framework, it said it wanted to move swiftly, citing the lack of oversight associated with the virtual currency as a national security threat.[8] According to *Strategas Research Partners*, the most significant risk to Bitcoin (and cryptocurrencies in general) is that it represents an existential threat to sovereign states to collect taxes, and in this regard, is likely to face increasing regulatory scrutiny.

Is Bitcoin a viable currency?

The hallmarks of a good currency are a relatively stable value, low transaction costs (the technical term is low transactional friction), quick commercial transaction effect, wide acceptance, and largely unsusceptible to fraud. By this measure, Bitcoin and other cryptocurrencies fare rather poorly:

1. **Relatively Stable.** Based on the standard definition and characteristics of money as a medium of exchange, Bitcoin's current volatility makes it an unreliable store of wealth. The standard deviation of the returns of Bitcoin versus the dollar has been 96% over the past 10 years and 73% in the past year (as of February 2021)[9]. The U.S. Dollar, alternatively, is very stable, generally appreciating every year in the foreign exchange markets at the rate of inflation. Given the fixed supply associated with many cryptocurrencies, Bitcoin included, the imbalances versus demand will continue to lead to large fluctuations in overall price levels, which monetary authorities will not tolerate.[10]

2. **Transaction Fees.** Bitcoin transaction fees are huge, and like Bitcoin itself, they can vary. To get your transaction processed in a reasonable amount of time, you must pay more, basically putting up a larger reward to get Bitcoin miners to verify your transaction using their crypto software. The current fee per transaction varies, but can average

between $10 and $20. In comparison, debit card transactions cost $0.21 plus 0.05% of the total payment in the USA, while credit card transactions cost between 1.43% and 3.5% of the payment. In addition, Bitcoin is designed so that the transaction fee will increase as the complexity to verify transactions goes up. So, transaction fees are "designed" to get higher and higher over time.

3. **Time of Transactions.** Bitcoin transactions take a long time to verify. They can take up to an hour or potentially longer, depending on the current level of aggregate transactions. Think of it as driving on a highway – if you drive during rush hour, there is going to be more traffic, and naturally the congestion will slow everything down. To confirm each transaction, the software in a decentralized computing model must receive up to six network confirmations – this is an intentional design of Bitcoin in order to move away from a central banking type system. Commerce would halt if consumers had to wait up to an hour, or longer, to process a commercial transaction.

4. **Widely Available.** Bitcoin is not accepted widely, nor rarely enters the daily financial processes of most merchants. As of December 2020, Bitcoin was accepted by just over 15,000 businesses worldwide (of which only 2,300 were based in the U.S.).[11]

5. **Fraud.** Cryptocurrencies like Bitcoin are ripe for fraud. Bitcoin is widely unregulated, and it attracts hackers and scammers. In 2014, the world's largest Bitcoin exchange, Mt. Gox, had its Bitcoin stolen by hackers. Over 850,000 Bitcoins were lost. In 2014, that was $450 million in value; now, it's worth over 40 billion dollars.

In summary, the U.S. Dollar (and other major foreign currencies) are generally stable, have low transaction fees, facilitate quick transactions, are widely available, and have safeguards built into the monetary systems to detect and prevent fraud, such as anti-money laundering and anti-counterfeiting efforts. Bitcoin to some degree fails each of these tests.

Is Bitcoin an investment?

Bitcoin, like Gamestop and other highly speculative and headline grabbing trades, has benefited from abundant liquidity in the market (both through low interest rates and unprecedented fiscal stimulus). Indeed, near zero interest rates have made the cost to speculate in Bitcoin negligible, thus increasing the number of speculators entering cryptocurrencies. This trend has been further aided by technology aimed at unsophisticated purchasers on Robin Hood, an online trading platform with a less than stellar reputation which has been the subject of a recent surge in complaints to the Federal Trade Commission.[12] Additionally, its popular narrative promising secrecy aligns with an increasingly popular anti-government movement in society that emanated from 2008 Great Financial Crisis.

In the end, the cryptocurrency market is akin to a massive Ponzi scheme wherein the only reason a buyer pays today's price is that they believe the next buyer will pay a higher price – there is no inherent value or tangible benefit in otherwise owning the digital token. It's price action in recent years, however, has created a self-feeding frenzy, wherein an increasing level of speculation compounds scarcity and increases prices, which in turn results in even greater speculation and euphoria. Similar manic episodes have arisen throughout history: The Dutch Tulip Bubble of the 1600's, the Dot Com Boom of the 1990's (based

upon fictitious revenues), and the Housing Crash of 2007 (caused by high risk loans packaged as safe investments based upon fraudulent repayment expectations).

In today's cryptocurrency bubble, Bitcoin is little more than a game built on blockchain technology, whose founders and promoters have used it to capitalize on the distrust of fiat currency and the establishment in general.[13]

What are the risks to buying Bitcoin or another cryptocurrency?

We have highlighted several risks to Bitcoin and other cryptocurrencies in the above Q&A. We thought it might be helpful to provide a summary of these risks in one place.

1. **Taxation.** The nature of cryptocurrencies is secrecy. This presents a major problem for sovereign states that tax transactions and capital gains. If you cannot know who was a party to a transaction, you cannot tax the transaction, nor can you apply a capital gains tax to any difference between what one purchased a unit of cryptocurrency for and the price for which one sold it. The taxing authorities need to have access to enough information to assess the correct taxes. The secrecy, which is a significant feature of cryptocurrencies, does not allow for this. The IRS is starting to become much more aggressive in this arena.[14] At the end of the day, if taxing authorities cannot tax it, they will kill it.

2. **Central Banks.** The power of the central banks of the world, including the U.S. Federal Reserve, is based on the fact that they control the money supply for their respective countries. They have policy goals that include promoting a stable money supply, positive economic growth, low unemployment, and stable/low inflation. Currently, the global money supply is approximately $37 trillion (in U.S. Dollars).[15] All cryptocurrencies in aggregate total less than $200 billion.[16] The world's central banks are treating current cryptocurrencies as an interesting experiment. Central banks do not share power and they will not allow their policy making potency to be degraded by cryptocurrencies. They have the authority to kill cryptocurrencies when they deem it appropriate, swiftly and with little notice. Currently, central banks are exploring the launch of Central Bank Digital Currencies, or CBDCs, that allow for transparency and taxation. Our belief is that when central banks feel threatened by the current batch of cryptocurrencies and believe they have learned enough from the experiment and/or have issued their own digital currencies, cryptocurrencies *in their current form* will go the way of the dinosaurs.

3. **Law and Order.** Currently, cryptocurrencies operate outside of a country's laws and regulations. As has been stated above, the secrecy underpinning cryptocurrencies (by design) makes them a haven of illicit transaction activity. These transactions avoid anti-money laundering rules and other laws and regulations intended to ferret out illegal activity. This can only go on for so long before regulations are imposed on cryptocurrencies to allow compliance with current laws, rules, and regulations. Those that cannot meet the new requirements will be shut down. Think about that for a moment: If the only value to a unit of cryptocurrency is what the next person in line is willing to pay for it and that cryptocurrency becomes illegal, the value of that unit falls to zero.

4. **Carbon Footprint.** The carbon footprint of cryptocurrencies is growing at a rapid pace. For the reasons stated above, mining of new units and verification of transactions is requiring more and more energy. Add to this the fact that two-thirds of this activity is taking place in China, where coal-fired energy plants are pervasive, and you now have yourself a carbon emissions nightmare that will only become worse.[17] For those concerned about carbon emissions, carbon footprints, and potential climate change concerns (which includes major developed countries around the world), cryptocurrencies are quickly becoming a major problem that will need to be addressed.

Any one of these material issues related to cryptocurrencies could lead to its eventual demise.

What is First Command's stance on placing money in Bitcoin and another cryptocurrency?

First Command does not and will not pursue speculative purchases with the capital entrusted to us by our clients. While the price moves in such trades can be exciting, they can also be permanently destructive to building long-term wealth and detrimental to financial plans based upon investing in tangible businesses backed by real assets that have built our country's and clients' wealth for generations. We will not touch Bitcoin or other cryptocurrencies in their current form with a ten-foot pole.

We would be naive to say that speculation has no place in the world, but it must be treated for what it is: a high risk opportunity based more on luck than skill, with the potential to lose 100 percent of your investment. This is how we view Bitcoin and other cryptocurrencies. Approach any decision to participate accordingly, and with limited financial exposure. You may get lucky, but the long-term odds are against you.

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Disclosures

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