

Bitcoin – A Simple Story

By Dr. George Yang

Bitcoin is a cryptocurrency and block-chain is the technology behind it. The block-chain allows transferring bitcoin (electronic cash) from person to person without any intermediary. This is different from government issued fiat currency (U.S. dollars) where I tell my bank to send money to your bank account and all transactions are recorded in the system.

How does it work with bitcoin? A good analogy is to think of the block-chain as a giant Excel spreadsheet that shows the complete transaction history and location of every bitcoin. Every 10 minutes, the spreadsheet gets updated as an additional “block” of new transactions (payment or receipt of bitcoins) are added.

Updating the spreadsheet is the job of participants on a computer network called “nodes”. “Nodes” are run by individual or groups (“miners”) who buy dedicated computer systems (“mining rigs”). They solve cryptographic math problems to address the identity, security, “double spend” problems, etc. In exchange, miners receive bitcoins.

The number of bitcoins awarded to a winning miner started at 50 in 2009 and has halved every four years afterwards. This makes the total number of bitcoins capped at 21 million. 18.5 million bitcoins have already been mined. Believe or not, 3 to 4 million of bitcoin has been stolen or lost!

Miners can sell bitcoin for cash. Whether reflecting the cost of mining or just speculative trading, the price of bitcoin has been very volatile historically: in 2013 it jumped 50+ folds, while dropping 83% during three days in April of that year. Most recently, it jumped 400% to over \$50,000 in less than 4 months!

Investors can buy or sell bitcoin from their digital “Wallet” account through online exchanges like Coinbase. Several open-end or trust funds cover bitcoin, however an ETF of bitcoin or any other cryptocurrency has yet to be approved by U.S. regulators.

Bitcoin’s limited supply, volatile price, and technical restrictions make it difficult to be used as a medium of exchange outside of the crypto currency space. Historically, investors treat bitcoin as a highly unreliable store of value. Nevertheless, insurance companies and banks have started investing in bitcoin as an alternative asset. S&P 500 companies such as Tesla, Twitter, and MicroStrategy have already acquired bitcoin to add to their treasuries. It now seems that bitcoin may be ready for institutional investing.

At a \$50,000 price tag, bitcoin’s total market cap passed one trillion dollars; that is about one tenth of the total value of gold which has been mined over the last 5,000 years, or half of the total value of silver. Bitcoin may be taking on some “storing value” function from gold, but how high can the price go? There are currently over 6,000 other cryptocurrencies and the Chinese central bank is also working on its own digital currency after being banned in 2018. At any rate, assuming the price of bitcoin is uncorrelated to the broad stock market and can find better price stability, a small but right-sized allocation in most portfolios could improve the risk-adjusted return.



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