

## Cryptomania

I met a hypothetical client, Frank, for lunch. I thought I would share some of our dialogue.

**Frank:** What's this bitcoin I've been hearing about?

**Jason:** Bitcoin was created in 2009 by a person (or group) who goes by the alias Satoshi Nakamoto. Satoshi saw the need for an electronic payment system that doesn't require a trusted third party, like a bank, to facilitate transactions. It allows two parties to exchange money online directly and anonymously with each other.

**Frank:** So is bitcoin like sending an e-Transfer?

**Jason:** Oh, no. An e-Transfer happens through the traditional banking channels. Bitcoin, on the other hand, operates on an open network called the "blockchain." The blockchain is the public ledger that records every transaction of bitcoin. You should think of bitcoin as a completely new monetary system, or at least that's the intention of its creator.

**Frank:** It sounds really complicated. And how did this Satoshi guy just invent money? You can't just invent money.

**Jason:** It's actually an old idea and was even envisioned in 1999 by the famous economist, Milton Friedman. But it was Satoshi who wrote a white paper in 2009 inventing the bitcoin protocol and all the complex mathematics and systems behind bitcoin.

**Frank:** Interesting. So I know that central banks print money, but how does one conjure bitcoin?

**Jason:** Bitcoin is often referred to as "digital gold" and you get it by mining it. Mining is actually a race to solve a very complex mathematical puzzle in which there are many contestants but only one winner. What mining actually does is add a "block" of transactions to the blockchain. So the miners of bitcoin are performing the valuable function of keeping the public ledger intact, and as a reward receive newly "minted" bitcoin.

**Frank:** Hmm, bizarre. So how many bitcoins are there and how much is one worth?

**Jason:** There are 21 million bitcoin but only 16.8 million have been mined so far. In 2010 you could have picked one up for under 25 cents, but when I checked this morning the price was about \$9,000 USD. It was almost \$20,000 USD in December 2017!

**Frank:** 

**Jason:** Oh, and just like a dollar can be divided into 100 cents, a bitcoin can be divided into 100,000,000 satoshis. If someone wants to buy \$10 worth of bitcoin, they can – they don't have to buy a whole bitcoin.

**Frank:** Maybe they should mine them instead?

**Jason:** At current prices, there are another \$50 billion of bitcoin yet to be mined. In the beginning you could mine bitcoin just by running the software on a desktop computer. Today, however, mining is big business because it requires massive amounts of computing power and electricity.

**Frank:** Wow, I had no idea. Ok, so why would someone want to buy bitcoin?

**Jason:** Well, I guess you would have to believe that someday it will be widely accepted as a form of money. But it doesn't quite function like money yet. Few goods and services are priced in bitcoin and you can't really use it for online purchases. Furthermore, its price is very volatile, like a highly speculative penny stock. You can't be confident of its purchasing power next year, let alone one week from now. However, if I were from Venezuela, which is in the midst of a tragic currency crisis, I might view bitcoin much differently.

**Frank:** I see. So what do you think bitcoin is actually worth?

**Jason:** It's impossible to tell. With a stock I can compare its price per share to its earnings per share, or its market value to its book value. You can't do that with bitcoin. On one hand, if bitcoin turns out to be the most efficient way to transact on the internet, then maybe it's worth a lot of

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money. On the other hand, one of the selling points of bitcoin was supposed to be scarcity, but because it's relatively easy to create a cryptocurrency, many people have. There are hundreds of them now. We'll have to wait and see how it all shakes out.

**Frank:** Hmmm. So what keeps driving the price up?

**Jason:** We are in the ninth year of a prolonged bull market and this has altered perceptions of risk. This is the point in a cycle when manias tend to develop. The commercialization of the internet during the 1990s was revolutionary, but the euphoria surrounding it destroyed a lot of wealth. People were indiscriminately buying the shares of companies that had ".com" in their name. We see the same sort of frenzied activity with cryptocurrencies.

**Frank:** What does the government think about bitcoin?

**Jason:** Well, that's another risk and it's too early to tell to what degree governments will regulate bitcoin. Will they see it as a currency, a property, or its own asset class? Do they see it as a national security risk and a means to evade taxation? We've seen the price of bitcoin drop harshly when some governments announced they wanted to crack down on bitcoin speculation. On the other hand, securities regulators are discussing cryptocurrency exchanges, Initial Coin Offerings (ICOs) and some are approving Exchange Traded Funds (ETFs).

Governments could also be concerned about the economic risks of bitcoin. Right now, bitcoin isn't entrenched in the real economy. Cryptocurrencies are mostly for trading, and so only a few people will be hurt if they go to zero. But if mining bitcoin, or other cryptocurrency activity, becomes a meaningful component of GDP, then it becomes a systemic risk. At that point, governments might actually want to regulate it and support it. I don't think anyone can be sure how this will evolve.

**Frank:** Are there any other risks?

**Jason:** There are technical risks with bitcoin itself. Bitcoin is built by volunteers and anyone can mine it if they have

the resources. Miners can form organizations to try to influence the volunteers who build the software. Early adopters have huge amounts of money and can use it for their own agendas. Within the cryptocurrency community there is infighting, compromise, entrenched beliefs, hidden agendas and manipulation. Nobody can predict how this will end.

**Frank:** So, can I assume QV doesn't own any bitcoin?

**Jason:** There are a few ways to get bitcoin exposure if one were inclined to. You can own it outright or you can own shares of public companies who mine bitcoin, or other cryptocurrencies. And I said, there are more and more ETFs popping up. There's even a derivatives market for bitcoin for those who want futures contracts. We aren't in any of that stuff. This is a highly speculative area of the market right now just like with the marijuana sector.

**Frank:** I've enjoyed our conversation, and thanks for lunch!

**Waiter:** Sir, your check whenever you're ready.

**Jason:** Can I pay you in bitcoin?

**Waiter:** What's this bitcoin people keep talking about?