SUMMARY

CRYPTOASSETS

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Summary of “Cryptoassets” by Chris Burniske and Jack Tatar

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Learn about the history and value of bitcoin.

Introduction

In an episode of the popular NBC comedy Superstore, a big box chain called Cloud 9 gets an update that their corporate office refers to as “Cloud 9.0” Although corporate never explains what this update is supposed to mean in practice, it’s clear that they hope to rebrand the store by reconfiguring its public perception as a place that is progressive, forward-thinking, and technologically advanced. Left to imagine what this actually means, the employees hazard guesses of their own. One posits that perhaps all employees will be given jetpacks which they can use to hover around the store. Another asks if this means that they will be paid in bitcoin.

In this context, bitcoin is only referenced as a joke, but the premise still remains: we might not know what bitcoin really is, but we think of it as the currency of the future. So, over the course of this summary, we’re going to explore what bitcoin is, how it’s really used in practice, and the controversy that surrounds it.

What is Bitcoin?

Whether you already know a little bit about bitcoin or your guess is as good as the Cloud 9 employees,' for the purpose of a book about crypto assets, we think it's best to start at the beginning. And that means starting with the definition of bitcoin. The economist Jake Frankenfield has coined his own description that can help us get to the meat of what bitcoin really is. Frankenfield posits that "bitcoin is a digital currency created in January 2009 following the housing market crash. It follows the ideas set out in a whitepaper by the mysterious and pseudonymous Satoshi Nakamoto. The identity of the person or persons who created the technology is still a mystery. Bitcoin offers the promise of lower transaction fees than traditional online payment mechanisms and is operated by a decentralized authority, unlike government-issued currencies.

There are no physical bitcoins, only balances kept on a public ledger that everyone has transparent access to, that – along with all Bitcoin transactions – is verified by a massive amount of computing power. Bitcoins are not issued or backed by any banks or governments, nor are individual bitcoins valuable as a commodity. Despite it not being legal tender, Bitcoin charts high on popularity, and has triggered the launch of hundreds of other virtual currencies collectively referred to as Altcoins." As you can see from this definition, bitcoin is not a physical form of currency like a $5 bill or a dime. And because it is electronic only, this means that bitcoin is what's known as "cryptocurrency." Unpacking the etymology of the word "cryptocurrency" is actually quite interesting! That's because the first part of the word-- crypto-- means "hidden" or "secret." And we all know that "currency" means "money." So, in essence, bitcoin is hidden or secret money that you can spend.

In practice, however, it's not quite as sneaky or secretive as the name implies. Rather, it's simply a form of electronic currency that you can't cash or physically hold. And the process of spending bitcoin isn't quite as

complicated as you might think! Frankenfield describes the process by explaining that “balances of Bitcoin tokens are kept using public and private "keys," which are long strings of numbers and letters linked through the mathematical encryption algorithm that was used to create them. The public key (comparable to a bank account number) serves as the address which is published to the world and to which others may send bitcoins. The private key (comparable to an ATM PIN) is meant to be a guarded secret and only used to authorize Bitcoin transmissions. Bitcoin keys should not be confused with a Bitcoin wallet, which is a physical or digital device which facilitates the trading of Bitcoin and allows users to track ownership of coins. The term "wallet" is a bit misleading, as Bitcoin's decentralized nature means that it is never stored "in" a wallet, but rather decentrally on a blockchain.”

So, now that we know a little bit about what bitcoin is and how it works, it’s time to dig deeper. In the next chapter, we’ll unpack the concept of a “cryptoasset” and learn why bitcoin falls in that category.

What is a Cryptoasset?

So, if bitcoins are simply a hidden form of electronic currency, does this mean that it's basically the same as money? After all, most of our finances are online these days. Our paychecks arrive in our bank accounts through an electronic direct deposit. We check our balance using banking apps. We pay our bills online. We send money to friends using apps like Venmo or PayPal. In each of these cases, we don't put our hands on physical currency. Rather, we simply move numbers around online, watching numbers rise and fall on our phone screens. So, what makes bitcoin different from the money we already use in everyday life?

To understand what makes cryptocurrency unique, we need to start by unpacking a couple of core distinctions that set bitcoin apart from traditional forms of currency. The primary difference is that no businesses will accept bitcoin as legal tender. For example, let's imagine that you walk into McDonald's and order a Big Mac and fries. Your total comes to an even $5.00. If you were to say, "I have $5.00 in bitcoin and I'd like to pay in bitcoin," it wouldn't do you any good! Even if you had a bitcoin app on your phone and a secure private key and everything, it wouldn't matter. They simply would not take your money. That's because bitcoin differs from fiat currency. "Fiat currency" is the term that we use for the traditional forms of money that we use on a daily basis. For example, cash and the money that's in your bank account both fall under the category of "fiat currency." Fiat currency differs from cryptocurrencies like bitcoin in that fiat currency is controlled by the government. Put simply, the cash in our wallets and the money in our bank accounts have value because the government says they do.

But because bitcoin isn't regulated by the government, it also isn't recognized by the government. The author observes that this is a perfect example of how the government uses its authority to control our finances and our choices at its whim. Because, when you think about it, fiat currencies only hold value because everyone has been made to believe that

they do. In reality, cash is nothing but a printed piece of paper that our society has imbued with meaning. If our reality was twisted and our government suddenly said that pinto beans were legal currency, then we would all pay with pinto beans and believe that they had value! So, because the government gets to control our financial reality by ascribing arbitrary value to certain types of currency, you can easily see why they have a vested interest in forcing us to pay only with the types of currency that they accept.

But cryptocurrencies like bitcoin don't rely on government-controlled channels. As a result, this has given rise to the popular misconception that bitcoin is somehow sketchy or unsafe. And in the interest of fairness, it's certainly true that some illegal operations can benefit from the availability of untraceable funds. For this reason, bitcoin is very popular on the dark web and can be used in any number of illegal activities like prostitution, the drug trade, and the production and purchase of child porn. But the author observes that fiat currencies can be used for all of things as well. And illegal activity isn't really the government's primary concern when it comes to bitcoin. Rather, they're concerned that if bitcoin caught on as a mainstream form of currency, the banking system as we know it might become obsolete.

And if we return to the widely publicized myth that bitcoin is perfect for illegal activity by virtue of its untraceability, it's important to clarify that bitcoin isn't untraceable by definition. Rather, it simply can't be traced by conventional, governmentally-approved means. As Frankenfield observes, "bitcoin is a relatively poor choice for conducting illegal business online, since the forensic analysis of the Bitcoin blockchain has helped authorities to arrest and prosecute criminals." It's also impossible to conceal your financial trail by using bitcoin because every new transaction is recorded and becomes part of the blockchain that characterizes your bitcoin wallet.

And that brings us to the second key distinction that characterizes bitcoin: its electronic nature. So, let's take a moment to explore the definition and function of cryptocurrency. Frankenfield defines cryptocurrencies as being "systems that allow for the secure payments online which are denominated in terms of virtual "tokens," which are represented by ledger entries

internal to the system. "Crypto" refers to the various encryption algorithms and cryptographic techniques that safeguard these entries, such as elliptical curve encryption, public-private key pairs, and hashing functions." As we mentioned in the previous chapter, users can access their cryptocurrencies using a secure private key known only to the user. They can then use this key to make transactions while avoiding the fees and policies of traditional financial institutions like banks. This means that cryptocurrencies are extremely private and extremely secure.

And as you can see from this definition, cryptocurrencies like bitcoin are not without their own safeguards and tracking functions. And making illegal online transactions isn't quite as easy as you'd think. That safety net exists because of bitcoin miners. The word "miners" might invoke an interesting mental picture for you because of bitcoin's perception as being the currency of the future. As a result, you might think about the California Gold Rush, when miners raced out West with their pickaxes and their gold-dust pans. But the author observes that this is actually a great analogy because mining for bitcoin is very similar. Just as people hoped gold would be the currency of the future, many people cherish the same hopes for bitcoin. And mining for bitcoin is more or less the same process as mining for gold. The only difference is that the process has now been digitized! And now, instead of gold mining being conducted by humans, the process of bitcoin mining is carried out by supercomputers.

Just as people sifted through rocks and silt, hoping to find a few nuggets of gold, these supercomputers sift through copious amounts of complex electronic code to find the details of bitcoin transactions. As we mentioned earlier in this chapter, bitcoin authenticity is ensured because each new transaction (also known as a "block" of code) is added to a public record called a "blockchain." Bitcoin miners then perform a similar function to banks or credit cards companies when they verify the authenticity of a transaction by adding it to the blockchain. Once a transaction is part of the blockchain, you-- and other bitcoin users-- can look up that record to confirm that the transaction was safe, secure, and verified. This prevents

something called “double-spending,” which occurs when a “block” or bitcoin transaction is duplicated.

Although we don’t have this problem with cash or the money in our bank accounts, bitcoin transactions can be copied because they are basically just strings of computer code. If you can duplicate your bitcoin, you can then spend money and hold onto the original at the same time. Obviously, that’s not ideal, so bitcoin miners exist to verify transactions and prevent duplications. Bitcoin might not be regulated by the government, but it has its own rules, regulations, and safety nets that are in place to keep users safe. And as you can see from the previously mentioned examples, bitcoin has its own advantages and downsides just like any other form of currency.

Should You Invest in Bitcoin?

Now that you've learned about what bitcoin is and how it works, this question might be at the forefront of your mind! If bitcoin really is the currency of the future, you might want to get in on the ground floor. But should you do it? The author believes that you absolutely should! He argues that bitcoin will eventually gain enough traction to supplant the traditional banking system and that this takeover will be extremely profitable for those who invested in bitcoin early on. He likens the future of bitcoin to the invention of the internet, email, and companies like Google. All of these were new, scary, and unpopular at one time too! But they soon rose to dominate the market. And once they did, everyone wanted to invest. Everyone was also pretty jealous of the visionaries who saw potential in these newfangled ideas long before they became mainstream.

So, how do you do it? Well, at the moment, bitcoin can be purchased using fiat currency. (Although you should be warned that this investment doesn't come cheap!) That's why the author advocates that you take some time to think about what you want to do with your cryptocurrency and whether the investment is worth it to you. He also advises that you watch the market for a while first and familiarize yourself with the rises and falls of the cryptocurrency market before you invest. With that said, he also cautions that bitcoin comes with the same risk as any other type of financial investment; there is always a chance that you could lose your money and be left with nothing. And that's why it's especially important that you take your time and familiarize yourself with the market before investing any money of your own. Once you feel comfortable that you know what you're doing, you can invest in your own way on your own time! He observes that bitcoin's inherently versatile nature makes it extremely profitable and flexible, and therefore, perfect for new investors.

Final Summary

Cryptocurrencies like bitcoin are often regarded as the currency of the future. We think of them in association with newfangled and high-tech things like jetpacks and technological upgrades. But many people don't know the specifics of what bitcoin does and how it operates. That's why it's important to familiarize yourself with the history, origin, and function of bitcoin. Once you have that information, you can then decide if you want to invest in the currency of the future and procure some profitable cryptoassets for yourself.