# WHAT ARE CRYPTO ASSETS ... AND WHY SHOULD YOU CARE?



From Bitcoin to blockchain, crypto asset buzzwords are on the lips of many. Yet, even though the crypto asset space is maturing fast, many advisors cannot tell their distributed ledgers from their digital wallets.

So, what are crypto assets – and why should advisors care?

# What Are Crypto Assets?

Most people have an idea of crypto assets as digital "coins" that exist exclusively online. Crypto assets are often associated with shadowy criminal networks, high-tech heists, and impenetrable tech jargon. The ideas that underlie these assets are, however, relatively straightforward and uncontroversial.

In the simplest terms, a crypto asset must have the following characteristics:<sup>1</sup>

- It must be digital. Today, a large proportion of the world's assets are digital. For example, there are around \$2 trillion of notes and coins in circulation, but almost \$7 trillion on the balance sheet of the US Federal Reserve. Most US dollars, therefore, exist only as digital entries in electronic ledgers at banks and other financial institutions. Futures contracts, certain stocks, and a host of other financial instruments likewise exist entirely in digital form. Yet none of these assets are considered crypto assets, because while all crypto assets are digital, not all digital assets are crypto assets. To achieve that status, an asset must have two other characteristics.
- It must rely on cryptography. As the name implies, crypto assets are reliant on cryptography. Cryptography is the process of securing communication and information from third parties. Crypto assets use cryptographic methods to secure transactions and transaction records, and to control the creation of new assets and prove asset ownership. While ownership of a dollar bill is determined by who has it in their physical wallet, ownership of a crypto asset token is determined by who has the cryptographic key to a digital wallet, for example.

It should use **blockchain** technology. As a general rule, most crypto assets use decentralized ledgers known as blockchains (see Box 1). Blockchains enable a high level of security and provide the infrastructure needed to create new tokens and record transactions – although their functionality can go far beyond this.

### Box 1: What Is Blockchain?

A blockchain is, essentially, a database made up of a chain of records in the form of timestamped "blocks." Each of the blocks contains a record of some type - transaction data, for example – a timestamp, and certain cryptographic information that helps to ensure the security of the data. Importantly, the blockchain is not stored on a single, central computer. Instead, multiple computers that make up the blockchain network each store a copy of the blockchain. This is why blockchain is also known as distributed ledger technology - the blockchain ledger is distributed over multiple computers or "nodes."

<sup>&</sup>lt;sup>1</sup> Jan Lansky. Possible State Approaches to Cryptocurrencies. Journal of Systems Integration. 2018.

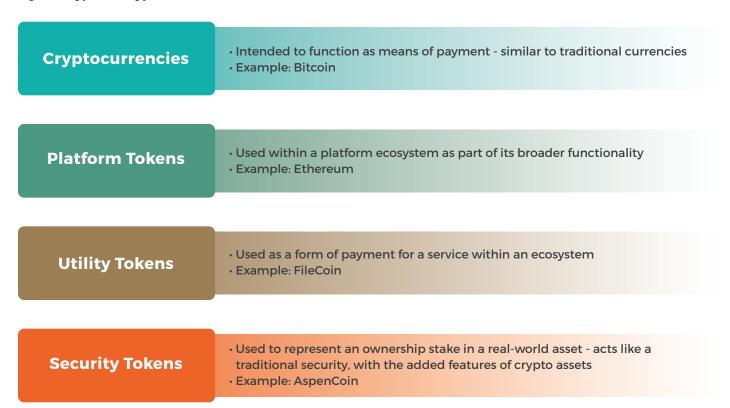
An important corollary of this definition is that the software or system that underpins crypto assets also governs the creation of new assets. In most networks, new assets are automatically created and distributed as rewards to nodes that perform important tasks on the network.

This is in contrast to traditional "fiat" currencies, such as US dollars, where new money is printed at will by a central government. However, while many crypto enthusiasts claim that crypto assets are, therefore, not fiat, in reality, they are. Like dollars, crypto assets are not backed by a real asset or commodity like gold. Both dollars and crypto assets have no inherent value other than that ascribed to them by their users – you cannot eat a crypto asset, nor live in it, nor burn it for warmth.

# **Crypto Assets As Investments**

Although the environment is changing rapidly and not all observers agree, it is possible to distinguish at least four types of crypto assets (see Figure 1).

Figure 1. Types of Crypto Assets



As Figure 1 indicates, crypto assets are designed for multiple purposes. Security tokens, for example, function like any other security (e.g. traditional stock) but use cryptography and distributed ledgers for transactions and record-keeping.

However, a growing number of people treat crypto assets as an investment class in their own right, with inherent value and the capacity for long-term appreciation. The most well-known example of this is Bitcoin (see Box 2), which some view as "digital gold" – they see Bitcoin as a hedge against inflation, a store of value, and a hedge against volatility in other asset classes.

## Box 2: Bitcoin As Digital Gold

Bitcoin is the most well-known cryptocurrency in circulation today and many enthusiasts believe it has the potential to behave much like gold as an investment asset. The Bitcoin blockchain is a payment system, which processes and records Bitcoin transactions. The nodes that do the work of processing and verifying transactions by solving a complex mathematical puzzle - called miners - receive payment for their work in Bitcoin. This is the only way in which new coins are created, and there is an upper limit of 21 million coins that can ever be mined. Thus, supporters argue that the limits on Bitcoin's supply will enable it to protect against inflation and will serve as a long-term driver of its value.

Despite the enthusiasm of some market sectors, there are many questions about the viability of crypto assets as an asset class.

### Lack of Regulation

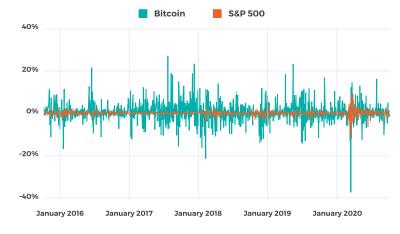
Although regulators are increasingly scrutinizing the crypto asset space, for the most part, these instruments remain largely unregulated. For example, most crypto exchanges, which facilitate buying and selling crypto assets using regular currency, are entirely unregulated and notoriously opaque.

This creates risks for unsophisticated investors – and, indeed, even for sophisticated investors – and for financial advisors, who could face censure if they advise clients to invest through risky, unregulated crypto trading platforms.

### Volatility

Many crypto assets are thinly traded, and academics have shown that, in many cases, their pricing is vulnerable to manipulation. As a result, most crypto asset prices are highly volatile (see Figure 2). This makes them inappropriate for conservative clients with low risk tolerances.

Figure 2: Bitcoin vs. S&P 500 Daily Price Changes (%)



Federal Reserve Bank of St. Louis. October 2020.

### Correlation

One argument in favor of crypto assets is that they act as a hedge against volatility in other assets. Bitcoin proponents, for example, argue that Bitcoin may serve as a hedge against market volatility in the same way that gold does. However, between October 2015 and October 2020, the correlation between Bitcoin prices and the S&P 500 Index was over 0.8.² This suggests that Bitcoin responds to the same market pressures and sentiments as equities, making it a poor hedging instrument (see Figure 3).

Figure 3: Bitcoin vs. S&P 500



Federal Reserve Bank of St. Louis. October 2020.

<sup>&</sup>lt;sup>2</sup> Federal Reserve Bank of St. Louis. October 2020.

### Security Vulnerabilities

Like all assets, crypto assets are subject to security vulnerabilities. Crypto exchanges have frequently been hacked – in 2019 alone, almost \$300 million of crypto assets were stolen from various exchanges, along with user logins.<sup>3</sup> While bank thefts are also common, government insurance plans cover losses in those cases – in the case of crypto assets, insurance is scarce and losses tend to be permanent. Similarly, many crypto asset owners have permanently lost their assets when they have lost access to their encrypted wallets. As noted, crypto assets determine ownership cryptographically, so a lost private key (similar to a password) means the permanent loss of any assets secured with that key.

These and other issues make crypto assets a risky proposition for all but the most informed, sophisticated, and tech-savvy investors.

# **Looking Ahead: Mainstream Activity**

Despite the various risks associated with crypto assets and the rapidly changing nature of the industry, many big banks are becoming more active in the space, although their support is not without caveats.

Goldman Sachs, for example, expressed enthusiasm for crypto assets early on. Then, in early 2020, the investment bank held an investor call in which it stated that crypto assets should not be considered an asset class. Later in the year, however, it appeared to again reverse course, appointing a global head of digital assets and exploring the development of its own digital coin. At present, most big banks are taking a cautious, wait-and-see approach to crypto assets – although many are interested in the possibilities of blockchain technology and in the use of digital tokens to facilitate international payments.

Without the wholesale embrace of major financial institutions and regulators, crypto investing will remain a relatively risky proposition. However, as the technology matures and the financial system adapts, new investment opportunities will likely emerge.

Advisors would be well advised to watch this space.

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<sup>&</sup>lt;sup>3</sup> SelfKey. Comprehensive List of Cryptocurrency Exchange Hacks. February 2020.