What Is Cryptocurrency?

A cryptocurrency is a digital or virtual currency secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. Most cryptocurrencies exist on decentralized networks using blockchain technology—a distributed ledger enforced by a disparate network of computers.

A defining feature of cryptocurrencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation.

KEY TAKEAWAYS

- A cryptocurrency is a form of digital asset based on a network that is distributed across a large number of computers. This decentralized structure allows them to exist outside the control of governments and central authorities.
- Some experts believe blockchain and related technologies will disrupt many industries, including finance and law.
- The advantages of cryptocurrencies include cheaper and faster money transfers and decentralized systems that do not collapse at a single point of failure.
- The disadvantages of cryptocurrencies include their price volatility, high energy consumption for mining activities, and use in criminal activities.

Understanding Cryptocurrency

Cryptocurrencies are digital or virtual currencies underpinned by cryptographic systems. They enable secure online payments without the use of third-party intermediaries. "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.

Central to the appeal and functionality of Bitcoin and other cryptocurrencies is blockchain technology. As its name indicates, a blockchain is essentially a set of connected blocks of information on an online ledger. Each block contains a set of transactions that have been independently verified by each validator on a network.

Every new block generated must be verified before being confirmed, making it almost impossible to forge transaction histories. The contents of the online ledger must be agreed upon by a network of individual nodes, or computers that maintain the ledger.

Experts say that blockchain technology can serve multiple industries, supply chains, and processes such as online voting and crowdfunding. Financial institutions such as JPMorgan Chase & Co. (JPM) are using blockchain technology to lower transaction costs by streamlining payment processing.

Types of Cryptocurrency

Many cryptocurrencies were created to facilitate work done on the blockchain they are built on. For example, Ethereum's ether was designed to be used as payment for validating transactions and opening blocks. When the blockchain transitioned to proof-of-stake in September 2022, ether (ETH)

inherited an additional duty as the blockchain's staking mechanism. The XRP Ledger Foundation's XRP is designed for financial institutions to facilitate transfers between different geographies.

Because there are so many cryptocurrencies on the market, it's important to understand the types. Knowing whether the coin you're looking at has a purpose can help you decide whether it is worth investing in—a cryptocurrency with a purpose is likely to be less risky than one that doesn't have a use.

Most of the time, when you hear about cryptocurrency types, you hear the coin's name. However, coin names differ from coin types. Here are some of the types you'll find with some of the names of tokens in that category:

- **Utility**: XRP and ETH are two examples of utility tokens. They serve specific functions on their respective blockchains.
- **Transactional**: Tokens designed to be used as a payment method. Bitcoin is the most well-known of these.
- **Governance**: These tokens represent voting or other rights on a blockchain, such as Uniswap.
- **Platform**: These tokens support applications built to use a blockchain, such as Solana.
- **Security tokens**: Tokens representing ownership of an asset, such as a stock that has been tokenized (value transferred to the blockchain). MS Token is an example of a securitized token. If you can find one of these for sale, you can gain partial ownership of the Millennium Sapphire.

If you find a cryptocurrency that doesn't fall into one of these categories, you've found a new category or something that needs to be investigated to be sure it's legitimate.

How to Buy Cryptocurrency

If you want to use cryptocurrency to buy products and services, you will need to visit a cryptocurrency exchange. These are businesses that allow you to buy or sell cryptocurrencies from other users at the current market price, similar to a stock. After buying the coins, you will need to transfer them to a digital wallet or use a third-party service like Coinbase to store your coins.

If you only want to buy cryptocurrency as an investment, you may be able to do so through your brokerage. For example, Robinhood allows users to invest in bitcoin and other cryptocurrencies, although you cannot withdraw them from the platform for purchases. In addition, there are several crypto ETFs that provide exposure to the crypto asset class without requiring the investors to maintain their own wallets. For instance, as of May 2024, investors may choose to hold Bitcoin futures ETF shares. The SEC has also approved the listing and trading of Ether spot shares.

Is Cryptocurrency Legal?

Fiat currencies derive their authority from the government or monetary authorities. For example, the U.S. dollar is recognized and issued by the government as the official currency of the United States and is "legal tender."

But cryptocurrencies are not issued by any public or private entities. Therefore, it has been difficult to make a case for their legal status in different financial jurisdictions throughout the world. It

doesn't help matters that cryptocurrencies have primarily functioned outside most existing financial infrastructure.

In the U.S.

The legal status of cryptocurrencies creates implications for their use in daily transactions and trading. In June 2019, the Financial Action Task Force (FATF) recommended that wire transfers of cryptocurrencies should be subject to the requirements of its Travel Rule, which requires AML compliance.

In the United States in July 2023, courts ruled that cryptocurrencies are considered securities when purchased by institutional buyers but not by retail investors purchased on exchanges.[1][2]

Enthusiasts called it a victory for crypto; however, crypto exchanges are regulated by the SEC, as are coin offerings or sales to institutional investors. So, crypto is legal in the U.S., but regulatory agencies are slowly gaining ground in the industry.

In Asia

Japan's Payment Services Act defines Bitcoin as legal property. Cryptocurrency exchanges operating in the country are required to collect information about the customer and details relating to the wire transfer.

China has banned cryptocurrency exchanges, transactions, and mining within its borders, but has a Central Bank Digital Currency (CBDC).

India was reported to be formulating a framework for cryptocurrencies, but until it is enacted, crypto is not yet illegal. Exchanges are free to offer cryptocurrencies.

In Europe

Cryptocurrencies are legal in the European Union. Derivatives and other products that use cryptocurrencies must qualify as "financial instruments." In June 2023, the European Commission's Markets in Crypto-Assets (MiCA) regulation went into effect. This law sets safeguards and establishes rules for companies or vendors providing financial services using cryptocurrencies.[1][7]

Is Cryptocurrency a Safe Investment?

Cryptocurrencies have attracted a reputation as unstable investments due to high investor losses from scams, hacks, bugs, and volatility. Although the underlying cryptography and blockchain are generally secure, the technical complexity of using and storing crypto assets can be a significant hazard to new users.

In addition to the market risks associated with speculative assets, cryptocurrency investors should be aware of the following risks:

- **User risk**: Unlike traditional finance, there is no way to reverse or cancel a cryptocurrency transaction after it has already been sent. By some estimates, about one-fifth of all bitcoins are now inaccessible due to lost passwords or incorrect sending addresses.18
- **Regulatory risks**: The regulatory status of some cryptocurrencies is still unclear in many areas, with some governments seeking to regulate them as securities, currencies, or both. A sudden regulatory crackdown could make it challenging to sell cryptocurrencies or cause a market-wide price drop.
- **Counterparty risks**: Many investors and merchants rely on exchanges or other custodians to store their cryptocurrency. Theft or loss by one of these third parties could result in losing one's entire investment.
- **Management risks**: Due to the lack of coherent regulations, there are few protections against deceptive or unethical management practices. Many investors have lost large sums to management teams that failed to deliver a product.
- **Programming risks**: Many investment and lending platforms use automated smart contracts to control the movement of user deposits. An investor using one of these platforms assumes the risk that a bug or exploit in these programs could cause them to lose their investment.
- **Market Manipulation**: Market manipulation remains a substantial problem in cryptocurrency, with influential people, organizations, and exchanges acting unethically.

Despite these risks, cryptocurrencies have seen a significant price leap, with the total market capitalization rising to about $2.4 trillion. Despite the asset's speculative nature, some have created substantial fortunes by taking on the risk of investing in early-stage cryptocurrencies.

Advantages and Disadvantages of Cryptocurrency

Cryptocurrencies were introduced with the intent to revolutionize financial infrastructure. As with every revolution, however, there are tradeoffs involved. At the current stage of development for cryptocurrencies, there are many differences between the theoretical ideal of a decentralized system with cryptocurrencies and its practical implementation.

Advantages

- Removes single points of failure
- Easier to transfer funds between parties
- Removes third parties
- Can be used to generate returns
- Remittances are streamlined

Disadvantages

- Transactions are pseudonymous
- Pseudonymity allows for criminal uses
- Have become highly centralized
- Expensive to participate in a network and earn
- Off-chain security issues
- Prices are very volatile

Advantages Explained

Cryptocurrencies represent a new, decentralized paradigm for money. In this system, centralized intermediaries, such as banks and monetary institutions, are not necessary to enforce trust and police transactions between two parties. Thus, a system with cryptocurrencies eliminates the possibility of a single point of failure—such as a large financial institution setting off a cascade of global crises, such as the one triggered in 2008 by the failure of large investment banks in the U.S.

Cryptocurrencies promise to make transferring funds directly between two parties easier without needing a trusted third party like a bank or a credit card company. Such decentralized transfers are secured by the use of public keys and private keys and different forms of incentive systems, such as proof of work or proof of stake.

Because they do not use third-party intermediaries, cryptocurrency transfers between two transacting parties can be faster than standard money transfers. Flash loans in decentralized finance are an excellent example of such decentralized transfers. These loans, which are processed without requiring collateral, can be executed within seconds and are mostly used in trading.

The remittance economy is testing one of cryptocurrency's most prominent use cases. Cryptocurrencies such as Bitcoin serve as intermediate currencies to streamline money transfers across borders. Thus, a fiat currency is converted to Bitcoin (or another cryptocurrency), transferred across borders, and subsequently converted to the destination fiat currency without third-party involvement.

Disadvantages Explained

Though they claim to be an anonymous form of transaction, cryptocurrencies are pseudonymous. They leave a digital trail that agencies like the Federal Bureau of Investigation (FBI) can follow. This opens up the possibility for governments, authorities, and others to track financial transactions.

Cryptocurrencies have become a popular tool with criminals for nefarious activities such as money laundering and illicit purchases. The case of Dread Pirate Roberts, who ran a marketplace to sell drugs on the dark web, is already well known. Cryptocurrencies have also become a favorite of hackers who use them for ransomware activities.

In theory, cryptocurrencies are meant to be decentralized, their wealth distributed between many parties on a blockchain. Ownership is becoming more concentrated, as witnessed by companies purchasing and holding them for price appreciation and investment fund managers buying them to hold in their funds.

One of the conceits of cryptocurrencies is that anyone can mine them using a computer with an Internet connection. However, mining popular cryptocurrencies requires considerable energy, sometimes as much energy as entire countries consume. The expensive energy costs and the unpredictability of mining have concentrated mining among large firms whose revenues run into billions of dollars.

Though cryptocurrency blockchains are highly secure, off-chain crypto-related key storage repositories, such as exchanges and wallets, can be hacked. Many cryptocurrency exchanges and wallets have been hacked over the years, sometimes resulting in the theft of millions of dollars in coins.

Cryptocurrencies traded in public markets suffer from price volatility, so investments require accurate price monitoring. For example, Bitcoin has experienced rapid surges and crashes in its value, climbing to nearly $65,000 in November 2021 before dropping to just over $20,000 a year and a half later. Bitcoin prices had roared back by mid-2024. As a result of this vast range of volatility, many people consider cryptocurrencies a speculative bubble.

Is Crypto Actually a Good Investment?

Crypto can be a good investment for someone who enjoys speculating and can financially tolerate losing everything invested. However, it is not a wise investment for someone seeking to grow their retirement portfolio or for placing savings into it for growth.

Is Crypto Real Money?

One definition of money is something that is generally accepted as a medium of exchange, a measure or store of value, and a unit of account. By this definition, cryptocurrency is real money.

How Does Crypto Make You Money?

There are several ways cryptocurrency can make money for you. Decentralized finance applications let you loan your crypto with interest; you can stake a compatible one on a blockchain or at certain exchanges for rewards, or you can hold on to it and hope its market value increases. None of these methods are guaranteed to make money, but many people have benefitted from them.

The Bottom Line

Cryptocurrencies are digital assets that are secured by cryptography. As a relatively new technology, they are highly speculative, and it is important to understand the risks involved before investing.