Digital Currency

1/ What Is a Digital Currency?

The term digital currency refers to a form of currency that is available only in digital or electronic form. It is also called digital money, electronic money, electronic currency, or cybercash. This means that there is no physical form. As such, it cannot be handled, stored, or manipulated. Consumers and businesses can use digital currencies to execute transactions and trades. These currencies may not be used by all countries or communities.

Key Takeaways

- Digital currencies are currencies that are only accessible with computers or mobile phones because they only exist in electronic form.
- Typical digital currencies do not require intermediaries and are often the cheapest method for trading currencies.
- All cryptocurrencies are digital currencies, but not all digital currencies are cryptocurrencies.
- Some of the advantages of digital currencies are that they enable seamless transfer of value and can make transaction costs cheaper.
- Some of the disadvantages of digital currencies are that they can volatile to trade and are susceptible to hacks.

2/ Understanding Digital Currencies

Digital currencies do not have physical attributes and are available only in digital form. Transactions involving digital currencies are made using computers or electronic or digital wallets connected to the internet or designated networks. In contrast, physical currencies, such as banknotes and minted coins, are tangible, meaning they have definite physical attributes and characteristics. Transactions involving such currencies are made possible only when their holders have physical possession of these currencies.

Digital currencies have utility similar to physical currencies. They can be used to purchase goods and pay for services. They can also find restricted use among

certain online communities, such as gaming sites, gambling portals, or social media networks.

Digital currencies also enable instant transactions that can be seamlessly executed across borders. For instance, someone in the United States may make payments to a counterparty in Singapore using digital currency, provided they are both connected to the same network.

3/ Characteristics of Digital Currencies

As mentioned earlier, digital currencies only exist in digital form. They do not have a physical equivalent. Digital currencies can be centralized or decentralized. Fiat currency, which exists in physical form, is a centralized system of production and distribution by a central bank and government agencies.
Prominent cryptocurrencies, such as Bitcoin and Ethereum, are examples of decentralized digital currency systems.

Digital currencies can transfer value. Using digital currencies requires a mental shift in the existing framework for currencies, where they are associated with sale and purchase transactions for goods and services.

Digital currencies, however, extend the concept. For example, a gaming network token can extend the life of a player or provide them with extra superpowers. This is not a purchase or sale transaction but, instead, represents a transfer of value.

4/ Types of Digital Currencies

Digital currency is an overarching term that can be used to describe different types of currencies that exist in the electronic realm. Broadly, there are three different types of currencies:

Cryptocurrencies

Cryptocurrencies are digital currencies that use cryptography to secure and verify transactions in a network.1 Cryptography is also used to manage and control the creation of such currencies. Bitcoin and Ethereum are examples of cryptocurrencies. Depending on the jurisdiction, cryptocurrencies may or may not be regulated.

Important

Cryptocurrencies are considered virtual currencies because they are unregulated and exist only in digital form.

Virtual Currencies

Virtual currencies are unregulated digital currencies controlled by developers or a founding organization consisting of various stakeholders involved in the process.2 Virtual currencies can also be algorithmically controlled by a defined network protocol. An example of a virtual currency is a gaming network token whose economics is defined and controlled by developers.

Central Bank Digital Currencies

Central bank digital currencies (CBDCs) are regulated digital currencies issued by the central bank of a country. A CBDC can be a supplement or a replacement for a traditional fiat currency. Unlike fiat currency, which exists in both physical and digital form, a CBDC exists purely in digital form. England, Sweden, and Uruguay are a few of the nations that are considering plans to launch a digital version of their native fiat currencies.3

The use of CBDCs has been suggested as a means of enhancing the speed and security of centralized payment systems, lowering the costs and dangers of handling cash, and promoting greater financial inclusion for people and companies without access to conventional banking services. They may also make cross-border payments easier and lessen the need for foreign exchange.

The introduction of a U.S. CBDC presents certain difficulties. For instance, for Congress to authorize the issuance of a CBDC, there must be robust privacy and security infrastructures put in place. The government must also weigh the possible impacts on monetary policy and the operational management of the switch from conventional money to a CBDC.

Digital Currencies	Virtual Currencies	Cryptocurrencies
Regulated or unregulated currency that is available only in digital or electronic form.	An unregulated digital currency that is controlled by its developer(s), its founding organization, or its defined network protocol.	A virtual currency that uses cryptography to secure and verify transactions as well as to manage and control the creation of new currency units.

Advantages and Disadvantages of Digital Currencies

Advantages

- **Fast Transfer and Transaction Times:** The amount of time required for transfers involving digital currencies is extremely fast. As payments in digital currencies are made directly between the transacting parties without the need for any intermediaries, the transactions are usually instantaneous and low-cost. This fares better compared to traditional payment methods that involve banks or clearinghouses. Digital-currency-based electronic transactions also bring in the necessary record-keeping and transparency in dealings.
- **No Physical Manufacturing Required:** Many requirements for physical currencies, such as the establishment of physical manufacturing facilities, are absent for digital currencies. Such currencies are also immune to physical defects or soiling that are present in physical currency.
- **Monetary and Fiscal Policy Implementation:** Under the current currency regime, the Fed works through a series of intermediaries (banks and financial institutions) to circulate money into an economy. CBDCs can help circumvent this mechanism and enable a government agency to disburse payments directly to citizens. They also simplify the production and distribution methods by obviating the need for physical manufacturing and transportation of currency notes from one location to another.

- **Cheaper Transaction Costs:** Digital currencies enable direct interactions within a network. For example, a customer can pay a shopkeeper directly as long as they are situated in the same network. Even costs involving digital currency transactions between different networks are relatively cheaper as compared to those with physical or fiat currencies. By cutting out middlemen who seek economic rent from processing the transaction, digital currencies can make the overall cost of a transaction cheaper.
- **Decentralized:** Digital currencies may be decentralized. This means they are not controlled by any government or financial institution. Decentralized digital currencies make them more resistant to government interference, censorship, and manipulation. Decentralization means true control over the digital currency is spread over a broader range of owners or users.
- **Privacy:** Because transactions with digital currencies are not linked to personal data, users are given a high level of privacy and anonymity. They are therefore very helpful for those who want to protect the confidentiality of their financial dealings.
- **Accessible Around the World:** Anyone with an internet connection can utilize digital currencies from anywhere in the globe. These services are therefore particularly helpful for people who do not have access to conventional banking institutions. In addition, many of these banking services only need access to an internet connection; for geographical areas that are not as developed with a strong financial infrastructure, digital currencies may be a stronger option.

Disadvantages

- **Storage and Infrastructure Issues:** While they do not require physical wallets, digital currencies have their own set of requirements for storage and processing. For example, an internet connection is necessary as are smartphones and services related to their provisioning. Online wallets with robust security are also necessary to store digital currencies.
- **Hacking Potential:** Their digital provenance makes digital currencies susceptible to hacking. Hackers can steal digital currencies from online wallets or change the protocol for digital currencies, making them unusable.

As the numerous cases of hacks in cryptocurrencies have proved, securing digital systems and currencies is a work in progress.

- **Volatile Value:** Digital currencies used for trading can have wild price swings. For example, the decentralized nature of cryptocurrencies has resulted in a profusion of thinly capitalized digital currencies whose prices are prone to sudden changes based on investor whims. Other digital currencies have followed a similar price trajectory during their initial days. For example, Linden dollars used in the online game Second Life had a similarly volatile price trajectory in its early days.4
- **Limited Acceptance:** Digital currencies are still not commonly used as a means of payment by retailers and other enterprises. Because of this, using them for routine transactions may be challenging. Though digital currencies have gained in popularity, there are still limited functionalities in everyday transactions in many places.
- **Irreversibility:** On a digital currency network, transactions are irreversible. This means that once a transaction has been completed, it cannot be undone. In circumstances where a mistake or fraud has taken place, this may be a disadvantage. This is also a tremendous disadvantage for those new to the digital currency space, as there is a substantial learning curve. Because there is no central oversight area for many digital currencies, new users can't simply go to their local branch to receive help for many digital currencies.