## University of Kentucky College of Agriculture, Food and Environment Cooperative Extension Service

# **Understanding Cryptocurrency**

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The concept of *cryptocurrency*, or digital currency, might sound a bit cryptic to many consumers. As cryptocurrencies become more widely used, consumers should still proceed with caution.

Cryptocurrency—such as Bitcoin, Litecoin, Ether, or others—is a form of digital payment consumers can use to buy goods and services. It exists without tangible corresponding bills or coins, and it is not issued or backed by government agencies. At its core, cryptocurrency is essentially digital computer software. People or entities can transfer it online without the need for a bank or financial institution. The currency is stored within a digital wallet that consumers can maintain either online or offline using a hard drive or paper printout.

### **Obtaining Cryptocurrency**

You must use government-issued money (or fiat currency) to buy cryptocurrency, similar to how you would buy casino chips or arcade tokens. Originally, cryptocurrency was developed to remove the intermediary in transactions and reduce the time it takes for transactions to occur. It is not issued or backed by the government or central bank like the dollar; therefore, its value can fluctuate. Some choose to use cryptocurrencies because of the anonymity it provides consumers when making purchases. Others choose cryptocurrencies as a form of investment, hoping the value increases.

Consumers who purchase cryptocurrency create an account on a cryptocurrency trading platform website or app. Many different options exist (e.g., Coinbase, Gemini, Binance, Kraken, eToro), which vary in services offered, fees, and costs of using the platform. Usually cryptocurrency is purchased with a bank transfer, credit card, or money transfer service. It may be beneficial to check with your bank first to make sure it allows transfers to the platform you are using. While most platforms accept bank transfers, some banks do not allow the transaction because of the unregulated nature of cryptocurrencies.



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It also is important to understand the fees associated with the purchasing platform you choose. Some platforms charge different fee rates for digital checks as opposed to debit or credit card purchases. Once the purchase is complete, the cryptocurrency is stored in a digital wallet that you must set up in advance. Research before choosing your wallet and select a reputable platform that you understand. Common variations include mobile, desktop, web, and hardware wallets. A "hot" wallet is connected to the internet, which makes it more convenient but also more susceptible to hacking. A "cold" wallet is an exter-

nal device designed for cryptocurrency storage. It offers more protection but is less convenient. Use cautious internet practices, such as strong passwords and secure networks, throughout the purchasing process to help prevent online theft.

### Mining, Blockchains, and More

Cryptocurrencies also can be obtained through a process called mining. Mining creates "blocks" of data by clumping chronological transactions together and creating a public record or ledger, also called a "blockchain." Mining is a complex process that is not for beginning or novel cryptocurrency users. Experienced miners are awarded cryptocurrency for their work in the creation of blockchains. They essentially solve cryptographic equations through the use of computer technology that verifies the legitimacy of past transactions, similar to an audit.

As more cryptocurrency is mined, the value of the currency fluctuates. Cryptocurrencies gain value based on user demand, supply, and utility. Some cryptocurrencies are capped. For example, only 21 million Bitcoins can be in existence. As the cryptocurrency is mined, the potential scarcity has an effect on the value of the currency. Less available currency can drive up the value as demand increases. Some cryptocurrencies, such as Dogecoin, are not capped and fluctuate based on popularity and interest in the market.

### Investment Risks of Cryptocurrencies

Some consumers purchase cryptocurrencies as a form of investment with the hopes that its value will increase over time. Cryptocurrencies have a high risk of loss because they are not backed by the government and their value fluctuates significantly over time. If you are considering purchasing cryptocurrency as an investment, be sure to thoroughly research the currency before purchasing. Use caution and only invest what you can afford to lose. Alternately, consider investing in mutual funds or exchange-traded funds that have holdings in cryptocurrency-related interests, such as the companies that host the trading platforms or other associated fields.

It is important to reiterate that cryptocurrencies are not government-insured or supported by the Federal Reserve. This means that if your cryptocurrency drops in value, if you lose your



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cryptocurrency through theft or fraud, or if the company you buy from goes bankrupt, for example, the government will not intervene or help replace your lost money.

### **Avoiding Cryptocurrency Scams**

While cryptocurrency transactions are anonymous, transaction data is public information that is posted to a public ledger or blockchain that can be accessed by anyone. A user's personal identifying information is not displayed; rather a public key or "node" is. This includes an identifying number linked to your digital wallet, similar to a username. The transaction is confidential. but not entirely anonymous. You also may be at risk of theft or hacking and should take proper measures to ensure your information is secure in your digital wallet. Beware of false websites that masquerade as trading platforms or wallet services. Always double-check that web addresses are accurate and legitimate before clicking links or visiting URLs.

While cryptocurrency can be used to purchase goods and services, depending on the retailer or seller, some purchases are nonrefundable. Always review the seller's refund policies before using cryptocurrency to pay for a transaction. Because some purchases made with cryptocurrency are not refundable, it is a preferred method for scammers. Scammers will receive payment for items or services that may be bogus. It is important to thoroughly vet cryptocurrency and companies that sell or accept it before purchasing. Malware also is a concern, either for hackers accessing your digital wallet or for scammers "cryptojacking" your computer or smartphone's processor to aid their mining activities without your knowledge or benefit.

The rapid value fluctuations of cryptocurrency pose another risk. Fluctuations in value make cryptocurrency ripe for scammers who create fake trading platforms, sell counterfeit currencies, or produce cryptocurrency versions of classic scams such as Ponzi schemes and "pump and dump" scams. A Ponzi scheme is a type of fraud in which funds from new investors pay "profits" to earlier investors, when in reality there may be no real investment. In a pump and dump scam, the seller promotes the investment until a large number of people buy, then the promoter sells at a profit and everyone else loses out.

Also be wary of online message boards or other online sources that offer cryptocurrency investment tips or secrets. In reality, they could lead people to phony investment websites. To learn more about using cryptocurrency and avoiding scams, visit the Federal Trade Commission's website at https://www.consumer.ftc.gov/articles/what-know-about-cryptocurrency-and-scams.

### **Being a Smart Crypto Consumer**

It is important to do your homework before purchasing cryptocurrency. Taking the time to research will help you avoid situations in which you may be vulnerable to scams or fraud. Safeguarding your passwords also is crucial in protecting yourself from fraud. If you choose to purchase cryptocurrency, be sure to have backup access to

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your digital wallet. Because cryptocurrencies are not regulated or insured, you will lose your cryptocurrency (and therefore the money you spent on it) if you lose access to your digital wallet.

As cryptocurrencies can be unpredictable, only purchase what you can afford to potentially lose. While there are many speculations about the stability, growth, and future of cryptocurrency, the true future is unknown.

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