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Crypto 101

Deciphering the world of virtual currency

The first workable cryptocurrency emerged in 2009 when Bitcoin hit the market. Since then the development of virtual currencies has exploded, and today, there are nearly 2,700 different cryptocurrencies being traded around the world, with nearly $49 billion worth changing hands in a single day. With a total value of more than $276 billion, the global cryptocurrency market is worth more than the gross domestic product of Greece, Egypt or Finland.

Even Facebook wants to get in on the act. In June, the social media giant announced a plan to create its own cryptocurrency, Libra, for purchasing goods and services through a restricted network that could reach millions of "unbanked" people in developing countries. The concept is something like the next generation of PayPal. So far, regulators and lawmakers are skeptical, given Facebook's past behavior and security issues.

The granddaddy of all cryptocurrencies, Bitcoin, traded at more than $11,000 in early August. Five years ago, it sold for as little as $750. If you had invested $75,000 for 100 Bitcoin then you would have a $1 million profit at this writing. But making money in cryptocurrencies isn't so easy.

"REAL MONEY" OR INVESTMENT?

Even though there are thousands of cryptocurrencies, they're all still a long way from functioning like actual money. Right now, cryptocurrency is a speculative asset, like buying the stock of one company that makes one product and hoping that it finds a permanent market. And not every cryptocurrency is going to be winner. In early August, XRP, the third-largest cryptocurrency, was changing hands at $0.31. The last time Bitcoin traded at that level was January 2011.

There's also been a crypto mania in the past few years, with everyone jumping on the bandwagon, offering cryptocurrency exchanges, trading cryptocurrency options and hedge funds that trade cryptocurrencies. All of that has traditional investors sniffing that this is nothing more than a bubble, much like the Internet boom of the later 1990s.

That's led to a lot of volatility in cryptocurrency prices. Bitcoin's price ranged from $350 to $1,242 in a single month during 2013. It crashed to $200 in early 2015. The bubble blew up in 2017, with prices starting the year around $800 and climbing to an all-time high of $19,783.06 in mid-December. Less than a week later, Bitcoin lost a third of its value in 24 hours and, by February 2018, was down to $6,200.

This extreme volatility makes it tough to treat cryptocurrency like real cash. It's hard to justify spending $100 in Bitcoin today for something from Overstock.com —one of the few places that actually takes Bitcoin payments—when that currency might be worth $300 a month from now, leaving you stuck with one highly overpriced blender. At that same time, it's hard to leave Bitcoin in your digital wallet when it doesn't pay interest or dividends and could very well lose half its value in a matter of days.

Think about it: Do you want to end up like Laszlo Hanyecz? He made the first real purchase with Bitcoin when it was valued at less than one-tenth of a cent in 2010, paying 10,000 Bitcoin for two pizzas in Jacksonville, Florida.

A year later, the Bitcoin Laszlo shelled out for those pizzas was worth $58,000.

HOW IT WORKS

Unlike other currencies, cryptocurrency isn't backed by the taxing ability of an entity such as the federal government, or any kind of commodity, such as gold, oil or bushels of wheat. Instead, it's based on supply and demand regulated by blockchain, the technology underlying cryptocurrencies.

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Blockchain is the latest buzzword in technology that promises to do everything from eliminate fiat currencies and central banks to control the settings on your Internet-connect toaster. The central element of blockchain is that it eliminates middlemen—no more bankers charging transaction fees, no more clerks making typos, no scammers creating fraudulent transactions, no records lost in fires, no censors or gatekeepers locking you in or blocking you out and charging a hefty fee for their privilege. To do so, blockchain eliminates gigantic, elaborate paper trails and the administrators who control the records.

The idea behind blockchain is a simple one that pre-dates computers and the Internet: A widely distributed network of shared ledgers that allows everyone in that network to permanently retain, review and verify all transactions. This "distributed ledger technology" concept is perfect but in reality, cryptographers and scholars have struggled with how to protect and verify chains of data going back to the Roman Empire.

The quandary was finally solved when the concept that would become blockchain popped into the mind of physicist Scott Stornetta one day in 1990, as he stood in line at a Friendly's ice cream store in Morristown, New Jersey. Stornetta's lightbulb moment was the notion that instead of relying on a central source of protected data, a secure system would consist of an interconnected system of ledgers that would create a daunting hurdle of linked records far too big for anyone to overwrite, alter or insert fraudulent information.



Working at the Bellcore research center spun off from Bell Labs, Stornetta and cryptographer Stuart Haber outlined a system of data blocks where each block includes a code called a "hash" that sums up its data. The hash of each blockchain is included in the next data block, create an unending historical chain where every single piece of data would need to be altered to create a fraudulent entry. This domino effect would serve as the security guarantee for all transactions.

Researchers continued to struggle with creating digital blockchains until 2008, when an individual or group of developers working under the pseudonym "Satoshi Nakamoto" used shared ledger technology to introduce Bitcoin, a peer-to-peer electronic cash system. Distributed over a worldwide network of computers, this decentralized cryptocurrency added digital technology and computer-generated consensus protocols to make each block in the chain dependent on the contents of the previous block, all the way back to the original block of data.

The first Bitcoin transaction took place on Jan. 12, 2009. Since then Bitcoin transactions surged to more than 300,000 per day.

INVESTING IN CRYPTOCURRENCY

If you want to try to make money on those transactions, there are two approaches: trading and mining. Mining Bitcoin is the process of adding new blocks of data to the chain by solving complex math problems that are rewarded with new Bitcoins. Ethereum, Litecoin or Zcash also are mined. Miners use specialized, powerful computers to guess the answer, which helps make the chain more secure and, as of today, earns them 12.5 Bitcoin. Recently, the odds of successfully solving such problems was 1 in 6 trillion, making this a highly specialized undertaking.

For something easier, you can trade Bitcoin or other cryptocurrencies, much like trading a stock, though not something a Dow Jones mainstay, but more like a penny stock. Your first step is to buy your currency, usually through a currency exchange, such as Coinbase, although there are several others. These connect to your bank account. Charges for trading typically involve a fee plus a percentage of your transaction, ranging from 0.5 percent to 5.9 percent. If you're buying Bitcoin, you can buy fractional shares, down to .001 Bitcoin.

You also can get some cryptocurrencies on the Robinhood.com investing platform, which offers commission-free trades. Another source is one of the 5,300 ATMs offering crypto, which are listed at CoinATMRadar.com, or through peer-to-peer exchanges such at Bitquick.co, Bisq.network, LocalBitcoins.com and others.

You'll also need to set up a crypto wallet to store your currency. There are virtual, cloud-based wallets offered through exchanges, and as apps for smartphones. Because they are software-based operations, wallets have been hacked, and some companies offering wallets have gone belly-up, resulting in losses. In March, a Japanese exchange lost $32 million in one hack to a virtual wallet. For more security, some investors turn to a hardware-based crypto-wallet that functions like a thumb drive, such as Trezor, SecuX, Ledger Nano and others, which you need to have on hand to make any transactions.

There are nearly 2,700 cryptocurrencies, with a total value of nearly $49 billion changing hands every day.

From there, trading Bitcoin, Ethereum, LiteCoin, XRP or any other cryptocurrency is like trading individual stocks. Based on the volatility factor, a short-term strategy that takes advantage of the daily ups and downs in values would be less risky than a long-term buy-and-hold strategy, such as you'd take with an indexed mutual fund.

If you're hoping to trade Bitcoin and other currencies through a broker, you're out of luck. So far, the Securities and Exchange Commission has vetoed the idea of allowing Exchange Traded Funds that track crypto currency to be created. Grayscale Investments has created two investment trusts that trade Bitcoin and Ethereum that can be traded through brokers. Besides fees, both trusts tend to trade at a premium, meaning that shares of the trusts often are more expensive than the underlying currency.

Whether Bitcoin and other cryptocurrencies are the future or a fad, the fact is that people are making—and losing—money trading in them right now. If you decide to ride the cryptocurrency wave hold on – it's bound to be a bumpy trip. ❖

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