



An Introduction to Cryptocurrency

Today, cryptocurrency and the underlying blockchain technology that supports it are more mainstream than ever. The first cryptocurrency was created in 2008, and now it's estimated that at least [46 million Americans](#) own crypto, with people in many other countries around the world adopting this technology at even [higher rates](#) than in the US.

What Is Cryptocurrency?

Cryptocurrency is a digital form of money. People buy, sell, hold, borrow, lend, send, and make purchases with cryptocurrencies similar to the way they do so with national "fiat" currencies, but the underlying technology is different.

What Are the Potential Benefits of Cryptocurrencies?

Cryptocurrencies provide a number of advantages that drive new efficiencies and create new opportunities. Depending on the use-case and implementation, the benefits can include:



Inclusion: financial services can be more easily extended to the unbanked and underbanked



Security: protection of user identities



Efficiency: fewer intermediaries can drive faster and cheaper services



Traceability: support for standard compliance measures¹



Availability: 24/7/365 operational availability without pause for holidays, weekends, etc.

What Are Some Examples of Cryptocurrency In Use Today?

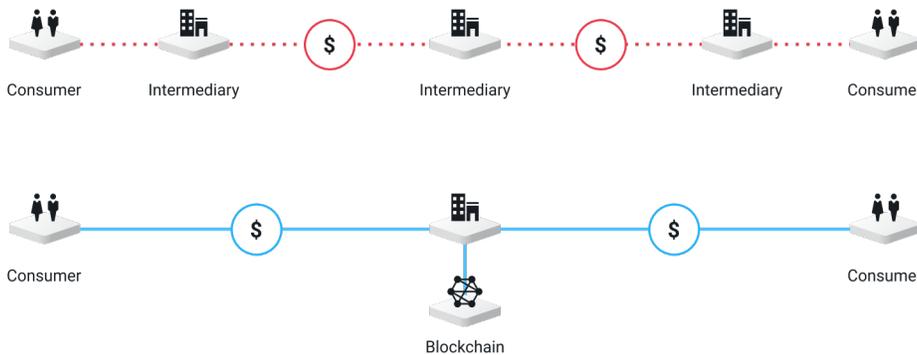
Cryptocurrencies are used in a variety of ways. Here are just a few examples:

- [Ripple](#) uses XRP to facilitate cross-border payments.
- [Sotheby's and Microsoft \(Xbox\)](#) have started to accept Bitcoin as a form of payment.
- [Twitter](#) nods to incorporating Bitcoin into the company's commerce products.
- [UNICEF](#) is the first UN organization to accept and distribute donations using cryptocurrency.
- [PayPal](#) enables people to make purchases with cryptocurrency.

¹ Like Anti-Money Laundering (AML) and Know your Customer (KYC) across many but not all cryptocurrencies

How Do Cryptocurrencies Work?

Rather than having a financial institution confirm a transaction, cryptocurrency transactions are managed by a large number of independent validators – computers connected to the blockchain’s open public ledger – that collectively confirm the transactions on the ledger. Each time a set of transactions are confirmed, a block of immutable information about those transactions is captured. The chain of all such blocks – or the blockchain – provides a secure history, accessible to all, that acts as a foundation to help ensure the accuracy of future transactions.



Traditional finance often requires a number of intermediaries who slow the process and make it more expensive.

Blockchain can reduce the number of intermediaries, making financial services more accessible and less expensive.

What Are the Differences Among Different Cryptocurrencies?

Different cryptocurrencies, and the blockchains that support them, were designed in different ways for different purposes. Here is some information regarding three of the most prominent cryptocurrencies and their blockchains.[^]

Cryptocurrency/Blockchain	Bitcoin/Bitcoin	Ether/Ethereum	XRP/XRP Ledger
Key Use	Store of Value An asset, like gold, that some people turn to because it is not subject to inflation.	Smart Contracts Automated contracts performing specified actions without manual intervention, e.g. paying interest to a lender.	Payments Rapidly move high-volume value across borders with low fees in a sustainable way.
Speed to Transact	6.833 minutes	5 minutes	3.83 seconds
Cost to Transact	\$0.465/transaction	\$9.00/transaction	\$0.0002/transaction
Transactions Per Second	5	10	1500 (max)
Energy Usage	131 TWh of energy/year*	45 TWh of energy/year	Carbon neutral

* 0.3% of global energy consumption

[^]Approximate, actuals vary



Ripple provides one frictionless experience to send money globally using the power of blockchain technology. By joining Ripple’s growing, global network RippleNet, financial institutions can process their customers’ payments anywhere in the world instantly, reliably and cost-effectively. Banks and payment providers can use the digital asset XRP to further reduce their costs and access new markets.