



Whitepaper on the Top 25 Cryptocurrencies By Market Cap

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Table of Contents

Cryptocurrency Overview	3
Bitcoin	4
Ethereum	4
Binance Coin	5
Tether	5
Cardano	6
Solana	6
Ripple	7
Polkadot	7
Shiba Inu	8
Dogecoin	8
USD Coin	9
Terra	9
Uniswap	10
Chainlink	10
Avalanche	11
Wrapped Bitcoin	11
Litecoin	12
Polygon	12
Binance USD	13
Algorand	13
Bitcoin Cash	14
Cosmos	14
Axie Infinity	15
VeChain	15
Stellar	16
Executive Summary	16
Comparative Table Ranked by Market Cap	17
Institutions' Attitudes towards Cryptocurrencies	18
Resources Referenced	19

Disclaimer: Price data and rankings last updated on October 29th, 2021 around 3:30pm

Cryptocurrency Overview

Overview and Information from "[MarketWatch: Investing In Crypto](#)" Web Series

What is Cryptocurrency?

Cryptocurrency is a digital/virtual currency that is validated and secured by cryptography. Cryptocurrencies are usually traded in the form of tokens or coins, and are found on blockchain-based networks that are decentralized, meaning that cryptocurrencies are mostly issued by private groups and improved upon and given value by large, open-source trading and development.

The blockchain is a network of computers that store and transfer data. In regards to cryptocurrency, blockchains often have the form of public ledgers, where multiple computers validate transactions in real-time to ensure validity and security for each crypto transaction.

Why Trade Cryptocurrency?

Cryptocurrencies have grown more mainstream over the last few years, and their global adoption is becoming more imminent than ever before. As banks, venture capital and large companies begin to use and trade cryptocurrencies, many retail investors are also doing the same, and since their rise to popularity, the values of many of the larger tokens have increased tenfold or even greater.

The State of Crypto Markets

Cryptocurrency markets in general have experienced major dips and peaks over the course of the last 10 years, where the markets as a whole have risen and dropped over 30% in value in a week's span multiple times. The markets have also seen the rise of meme-based coins, such as Dogecoin and Shiba Inu, that have risen over 1000% due to **over-speculation** in less than a year.

However, these last few months have shown that the larger coins, Bitcoin and Ethereum, can anchor the markets and remain relatively stable in the short term, and hopefully far in the long term.

The SEC and Regulations on Crypto

Currently, the cryptocurrency markets are under **large scrutiny from the US government**, as well as other nations since they are generally unregulated. While this was the original purpose of crypto, many investors have amassed large fortunes over the years, and the lack of taxes and regulations has created a major discussion point for many federal governments.

The main tokens that are looking to be regulated by the SEC are stablecoins, which are pegged to fiat currencies such as the Euro and US dollar, and crypto giants Bitcoin and Ethereum, since they are the largest in both market capitalization and daily trading volume.

Bitcoin

BTC



bitcoin.org/en/

Description:

Bitcoin is a decentralized online currency created in 2009. Its purpose is to provide a method for peer-to-peer transactions without the need for any intermediaries. Transactions are verified three times using its blockchain, which regulates and records all Bitcoin transactions with network nodes and cryptography. Bitcoin is the largest and most widely used and accepted cryptocurrency in the world, with countries such as El Salvador and large companies such as Microsoft, Wikipedia, and AT&T adopting it as a method of payment.

How It Works:

Every Bitcoin transaction executed within a given time frame is recorded into a “block,” and is the basis of how the blockchain operates. Each block is available to see by the public and shows a reference to the previous block as well as a link to a future block, making it triple verified and virtually impossible to tamper with. Each block is also linked with an uber-complex mathematical problem, and computers, also known as “miners” are competing to solve the problem first to win a share of Bitcoin. Therefore, Bitcoin is a reward for “mining.” When a block is solved, miners are rewarded a newly minted amount of Bitcoin which is added to the overall circulation. The first record in that next block is a transaction that awards the winning miner the newly minted BTC.

Founder(s):

An unknown person or group that goes by the alias Satoshi Nakamoto, which translates to “Central Intelligence” in Japanese.

Financial Summary: Market Cap: >\$1.1T **52-week Range:** \$12,752.65 – \$66,930.39 **All-time High:** \$66,930.39 (October 20, 2021) **Amount In Circulation:** 18,851,187 BTC (out of 21,000,000 max)

Ethereum

ETH



ethereum.org/en/

Description:

Ethereum is an open-source, decentralized blockchain that allows for other decentralized applications to build upon it. The native cryptocurrency on this platform is Ether (ETH), which is the second-largest cryptocurrency by market cap only to Bitcoin.

How It Works:

Similar to Bitcoin, the Ethereum network awards miners with ether for securing the network, verifying transactions, and adding blocks to the blockchain. Programmers can also use the Ethereum blockchain to create decentralized applications, non-fungible tokens (NFTs), and other crypto tokens by “staking” ether as collateral to fund their projects, allowing for the network to be self-sustainable and self-regulated.

Founder(s):

ETH was originally created by Russian-Canadian programmer and writer Vitaly Dmitriyevich “Vitalik” Buterin.

Financial Summary: Market Cap: >\$430B **52-week Range:** \$362.60 – \$4,362.35 **All-time High:** \$4,362.35 (May 12, 2021) **Amount In Circulation:** 117,843,930 ETH

Binance Coin

BNB



binance.com/en/bnb

Description:

Binance Coin (BNB) is the cryptocurrency issued by the exchange company Binance. It was originally founded on the Ethereum platform but is now the native currency of the Binance blockchain, known as the Binance Chain. Binance Coin launched in 2017 via a public coin offering with a debut market cap of \$15 million.

How It Works:

Originally founded as a way to pay transaction fees on Binance.com, Binance DEX, and Binance Chain, BNB now also allows holders to make credit card payments, pay for travel arrangements on a few websites, buy virtual gifts, and invest in other initial coin offerings listed in the Binance Chain. BNB is earned by mining using a proof-of-stake system. However, to keep the amount in circulation regulated, Binance uses one-fifth of its profits to repurchase and permanently “burn,” or destroy, BNB every quarter. This way, BNB would always have a constant supply to be mined, as well as have its price regulated.

Founder(s):

BNB was founded by Changpeng Zhao, the CEO of Binance, the world’s largest crypto exchange marketplace.

Financial Summary: Market Cap: >\$85B **52-week Range:** \$25.90 – 690.93 **All-time High:** \$690.93 (May 11, 2021) **Amount In Circulation:** 168,137036 BNB

Tether

USDT



tether.to

Description:

Tether is known as a stable coin that is pegged to the US dollar at a 1:1 ratio.

How It Works:

Tether’s \$1 price is achieved by maintaining the amount of UDST in circulation to the amount of US dollars in circulation. Tether does not have its own blockchain, as it operates as a second-layer token on top of other cryptocurrencies’ blockchains: Bitcoin, Ethereum, EOS, Tron, Algorand, Bitcoin Cash, and OMG, and is secured by their respective hashing algorithms.

Founder(s):

Tether was co-founded by Brock Pierce, Reeve Collins, and Craig Sellars in 2014.

Financial Summary: Market Cap: >\$68B **52-week Range:** \$0.9456 – \$1.03 **All-time High:** \$1.21 (May 27, 2017) **Amount In Circulation:** 68,215,069,675 USDT

Cardano

ADA



cardano.org

Description:

Cardano is an open-source blockchain platform that utilizes a “proof-of-stake” system rather than the traditional “proof-of-work” system to regulate and track its platform. The native cryptocurrency on Cardano is Ada, which has the third-largest market cap of all cryptocurrencies.

Cardano was funded via a public coin offering in 2015 at an initial market cap of \$600 million.

How It Works:

Cardano uses proof-of-stake protocols, which, unlike the proof-of-work protocols that Bitcoin and Ethereum use, do not use extreme amounts of energy consumption and require miners to “stake,” or collateralize, cryptocurrency for a chance of getting to validate a block of new transactions and earn a reward. This also allows Cardano to overcome scalability issues since the blockchain is able to self-regulate the amount of Ada in circulation. Like Ethereum, Cardano also allows for decentralized applications to be built upon its blockchain.

Founder(s):

Cardano was originally authored by Charles Hoskinson with the help of Vitaly Buterin.

Financial Summary: Market Cap: >\$72B **52-week Range:** \$0.0880 – \$3.0992 **All-time High:** \$3.0992 (September 2, 2021) **Amount In Circulation:** 32,025,787,327 ADA (out of 45,000,000,000 max)

Solana

SOL



solana.com

Description:

Solana is similar to Ethereum, as it is an open-source blockchain platform used to create and host decentralized applications. It offers faster operations and lower transaction costs compared to other large blockchain platforms. Solana has been deemed by many as a “true competitor” to Ethereum, as it has room for exponential scalability and user growth.

How It Works:

Solana uses a proof-of-stake system to mine SOL. However, the requirements to become a miner/validator are extremely high compared to Ethereum or other large networks, meaning that only few users are can be efficient validators.

Founder(s):

Anatoly Yakovenko founded Solana Labs in 2015.

Financial Summary: Market Cap: >\$47B **52-week Range:** \$1.09 – \$214.96 **All-time High:** \$214.96 (September 9, 2021) **Amount In Circulation:** 300,250,418.48 SOL

Ripple

XRP



ripple.com/xrp/

Description:

Ripple is a payment settlement and cryptocurrency exchange platform used globally. The native cryptocurrency on the platform is XRP and its blockchain is called the XRP Ledger. The platform is currently used by some large banks such as Santander, Axis Bank, and Yes Bank, as well as a few other large companies.

How It Works:

The platform generates profits by implementing a minimal fee of 0.00001 XRP per transaction.

There is no mining for XRP, as the XRP Ledger pre-mined 100 billion tokens that are either held in its treasury or are held for periodic release to keep the token's value stable. The blockchain for XRP also works differently compared to other major blockchains, as this one uses a few trusted validators to verify information about transactions.

Founder(s):

Chris Larsen and Brad Garlinghouse launched XRP in 2012.

Financial Summary: Market Cap: >\$50B **52-week Range:** \$0.1748 – \$1.96 **All-time High:** \$3.84 (January 4, 2018) **Amount In Circulation:** 46,805,773,456 XRP (out of 100,000,000,000 max)

Polkadot

DOT



polkadot.network

Description:

Polkadot is a protocol/multichain that connects blockchains and allows for previously-incompatible networks to connect with each other, such as the Bitcoin and Ethereum networks. The native cryptocurrency on the platform is called the Polkadot token, or DOT.

How It Works:

Polkadot is set up as three types of blockchains: the Relay Chain, parachains, and bridges. The Relay Chain is the main blockchain where transactions are finalized. Polkadot is able to process thousands of transactions per second by separating the tasks of adding new transactions to the blockchain and validating the transactions. Parachains are custom-built blockchains used to validate transactions for accuracy. Bridges are what allows Polkadot to interact with other blockchains.

The blockchain uses a nominated proof-of-stake protocol, where users who stake their DOT tokens are able to gain more votes and achieve the status of a trustworthy validator. Users can also stake their DOT to earn more DOT as a reward and gain governance voting rights.

Founder(s):

Gavin Wood, Peter Czaban, and Robert Habermeier co-founded Polkadot in 2016.

Financial Summary: Market Cap: >\$39B **52-week Range:** \$3.84 – \$49.69 **All-time High:** \$49.69 (May 15, 2021) **Amount In Circulation:** 987,579,314.96 DOT

Shiba Inu

SHIB



shibatoken.com

Description:

Nicknamed the “Dogecoin killer,” Shiba Inu is an Ethereum-based token listed on its own decentralized exchange called ShibaSwap. SHIB is an altcoin based on Dogecoin, and like Dogecoin, Shiba Inu has garnered value through media popularity and memes, as well as from those who missed the famous Dogecoin price spike. As it has risen to popularity, it has since been listed on Coinbase and Robinhood for investors to buy into the token.

How It Works:

ShibaSwap is similar to Uniswap as it uses liquidity pools to convert Shiba Inu tokens to other major cryptocurrencies such as Ethereum and other ERC-20 tokens. SHIB holders can also stake their tokens in these liquidity pools to earn small interest on their staked funds.

Founder(s):

SHIB was launched in 2020 by an unknown developer under the name “Ryoshi.”

Financial Summary: Market Cap: >\$40B **52-week Range:** \$0.002452 – \$0.7376 **All-time High:** \$0.00008845 (October 28, 2021) **Amount In Circulation:** 589,738,956,207,004 SHIB

Dogecoin

DOGE



dogecoin.com

Description:

Dogecoin is a cryptocurrency inspired by a popular meme from the early 2010s known as Doge. It was meant to be a joke about crypto markets at the time due to the extreme speculation surrounding cryptocurrency, as well as bring more attention to the cryptocurrency markets beyond the core Bitcoin audience since it was based on a dog meme. Since then, Dogecoin has become much more popular than its creators imagined, with Elon Musk and popular social media influencers tweeting and investing in the coin. DOGE has also evolved into a method of payment for tipping online content creators or for crowdfunding efforts.

How It Works:

Dogecoin is a fork of another popular cryptocurrency, Litecoin, and is mined with the same process as Litecoin, which is done with a proof-of-work protocol. There is no supply limit for Dogecoin, so the value is exclusively inflationary, and as a result, over 130 billion units of DOGE have been mined to this day.

Founder(s):

Billy Markus and Jackson Palmer released Dogecoin in 2013.

Financial Summary: Market Cap: >\$38B **52-week Range:** \$0.002452 – \$0.7376 **All-time High:** \$0.7376 (May 8, 2021) **Amount In Circulation:** 131,705,676,458 DOGE

USD Coin

USDC



solana.com

Description:

USD Coin is a stablecoin that is pegged to the U.S. dollar on a 1:1 ratio. The total amount of USDC is the exact same amount of US dollars in circulation, allowing the coin to consistently remain at \$1 per unit.

How It Works:

Coinbase hired Grant Thornton to verify the levels of cash that are held in reserve after each quarter and ensure this matches up with the number of tokens in circulation to keep the coin almost always exactly pegged to the US dollar. The coin was launched on the Ethereum network and is able to be held by anyone who uses an Ethereum-compatible wallet.

Founder(s):

USDC was founded by companies Coinbase and Circle in 2018.

Financial Summary: Market Cap: >\$32B **52-week Range:** \$0.9559 – \$1.05 **All-time High:** \$1.11 (October 15, 2018) **Amount In Circulation:** 32,867,151,750 USDC

Terra

LUNA



terra.money

Description:

Terra is a blockchain that lets users create stablecoins pegged to fiat currencies. As of now, it offers stablecoins pegged to the U.S. dollar, South Korean won, Mongolian tugrik, and the IMF's Special Drawing Rights basket of currencies, and has more fiat pegs in its pipeline. The native cryptocurrency on Terra is LUNA, which helps keep these stablecoins accurately pegged to their respective fiat currencies, as well as giving holders the right to vote on proposals with changes regarding the Terra protocol.

How It Works:

To mint a stablecoin, investors need to convert an equivalent monetary amount of LUNA tokens. Terra will then burn the tokens investors are converting. The same works the opposite way, where if an investor wants to convert their stablecoins to LUNA, the stablecoins are burned after the conversion to LUNA occurs, enabling consistent price pegging both ways.

Founder(s):

Do Kwon and Daniel Shim of Terraform Labs launched Terra in 2019.

Financial Summary: Market Cap: >\$17B **52-week Range:** \$0.2758 – \$49.45 **All-time High:** \$49.45 (October 4, 2021) **Amount In Circulation:** 401,578,243.90 LUNA

Uniswap

UNI



uniswap.org

Description:

Uniswap is an Ethereum-based DeFi application that allows traders to trade different Ethereum-based cryptocurrencies. The platform mirrors a traditional currency exchange but without the need for a centralized authority or administrator. The native currency on the Uniswap platform is UNI.

How It Works:

Uniswap uses liquidity pools, where liquidity providers contribute to Uniswap pools by first locking two assets into a smart contract. An example of this would be Uniswap's DAI/ETH liquidity pool, which consists of equal values of DAI and ETH deposits, and investors are able to use such pools to directly exchange tokens for another (for a small fee). In exchange for maintaining liquidity in these pools, providers are rewarded with a portion of the trading fees, along with newly minted UNI cryptocurrency. Because Uniswap is based on the Ethereum blockchain, investors cannot use tokens that use other blockchains.

Founder(s):

Ethereum developer Hayden Adams launched Uniswap in late 2018.

Financial Summary: Market Cap: >\$15B **52-week Range:** \$0.2758 – \$49.45 **All-time High:** \$49.45 (October 4, 2021) **Amount In Circulation:** 611,643,723.83 UNI (out of 1,000,000,000 max)

Chainlink

LINK



chain.link

Description:

Chainlink is a decentralized platform that links outside data sources to smart contracts on its native blockchain, the Chainlink Network. It was launched to combat the issue of a lack of a bridge between blockchain smart contracts and external data sources that are needed to execute the terms of a contract. The native currency on the blockchain is LINK, which can be mined by accurately providing external data for smart contracts.

How It Works:

Chainlink incentivizes “oracles” (data providers) to act as a bridge between blockchain smart contracts and external data sources, and the accuracy of their data is graded with a reputation score. When these oracles correctly follow the protocols for providing useful data, they are rewarded LINK based on their reputation scores.

Founder(s):

Chainlink was launched in 2017 by the company SmartContract, which was founded by Steve Ellis and Sergey Nazarov.

Financial Summary: Market Cap: >\$13B **52-week Range:** \$8.51 – \$52.88 **All-time High:** \$52.88 (May 10, 2021) **Amount In Circulation:** 460,509,553.92 LINK (out of 1,000,000,000 max)

Avalanche

AVAX



avax.network

Description:

Avalanche is a [layer-one blockchain](#) rivaling Ethereum that allows developers to build DeFi applications and custom blockchain networks on its platform. The blockchain claims to be able to handle a transaction output of up to 6,500 transactions per second while not compromising scalability.

How It Works:

Avalanche is comprised of three main blockchains that make up the network: the Exchange Chain (X-Chain), Contract Chain (C-Chain), and Platform Chain (P-Chain). The X-Chain is used to create and exchange other tokens with the platform's native AVAX token for a minimal fee. These transactions are recorded and regulated using the [Avalanche consensus protocol](#). The C-Chain is where developers can create decentralized applications as well as convert Ethereum-based applications to the Avalanche blockchain. This chain uses a modified version of the Avalanche consensus protocol called Snowman to regulate its developers and applications. The P-Chain coordinates network validators, tracks active subnets, and allows for the creation of new subnets. Subnets are sets of validators providing consensus for custom blockchains. A blockchain can be validated by only one subnet, but each subnet can validate multiple blockchains. The P-Chain also uses the Snowman consensus protocol.

The AVAX token is able to connect each of these chains together since the token is used to stake (to become a validator for rewards) and pay network fees, enabling the entire network to have one common asset that can be used throughout the different subnets.

Founder(s):

Avalanche was launched by Ava Labs (founded by Emin Gün Sirer, Kevin Sekniqi, and Maofan "Ted" Yin) in late 2018.

Financial Summary: Market Cap: >\$14B **52-week Range:** \$2.79 – \$79.52 **All-time High:** \$79.52 (September 23, 2021) **Amount In Circulation:** 220,286,577.21 AVAX (out of 720,000,000 max)

Wrapped Bitcoin

wBTC



wbtc.network

Description:

Wrapped Bitcoin is an [ERC-20](#) token that represents Bitcoin on the Ethereum blockchain. 1 unit of wBTC is pegged to the price of 1 unit of Bitcoin and allows for Bitcoin holders to participate in DeFi applications on the Ethereum blockchain.

How It Works:

When swapping BTC for wBTC, a merchant verifies the investor's identity and history and swaps the tokens via BitGo, the only custodian of wBTC. BitGo then sends the proper amount of wBTC to the merchant's Ethereum address. The merchant and the original investor then trade their tokens with each other, so the BTC is given to the merchant and the wrapped Bitcoin is given to the investor, which they can use on DeFi applications on the Ethereum network. When the investor wants to convert their wBTC back to BTC, they make a request to the merchant, and the wBTC is traded back, and the merchant then burns the wBTC so it is taken out of its total supply.

Founder(s):

Wrapped Bitcoin is a part of the [Wrapped Tokens project](#) which was launched as a joint project in 2019 between three organizations: BitGo, Kyber Network and Ren.

Financial Summary: Market Cap: >\$13B **52-week Range:** \$12,717.31 – \$66,895.74 **All-time High:** \$66,895.74 (October 20, 2021) **Amount In Circulation:** 221,093.03 WBTC

Litecoin

LTC



litecoin.org

Description:

Intended to be a “lite version of Bitcoin,” Litecoin was created as an alternative to Bitcoin that offered similar but modified features. It was designed to provide faster payments targeted towards micro-transactions and point-of-sale payments and was viewed by many as the silver to Bitcoin’s gold. Presently, Litecoin is accepted as a method of payment by thousands of companies and merchants around the world.

How It Works:

Litecoin was created by modifying Bitcoin’s code, and as a result, shares many of the features that Bitcoin offers. Litecoin also uses a form of proof-of-work protocol for mining and earning new Litecoin. The big difference between Litecoin and Bitcoin is that the former allows miners to add new blocks to the blockchain every 2.5 minutes, whereas the latter takes 10 minutes. The supply limit for LTC is 84 billion tokens, and currently, over 68 billion have been mined.

Founder(s):

Litecoin was launched on GitHub in 2011 by Charlie Lee.

Financial Summary: Market Cap: >\$13B **52-week Range:** \$51.61 – \$412.96 **All-time High:** \$412.96 (May 10, 2021) **Amount In Circulation:** 68,805,945.39 LTC (out of 84,000,000 max)

Polygon

MATIC



polygon.technology

Description:

Coined the “internet of blockchains,” Polygon is essentially a multi-chain system of Ethereum-compatible blockchains where blockchains on the Ethereum network will be able to quickly and seamlessly transfer info and value to each other. Polygon was designed to be an answer to the existing challenges for Ethereum: high fees, a lackluster user interface, and relatively low transaction speeds and capacities.

How It Works:

Blockchains created in the Polygon network use the Matic proof-of-stake (PoS) sidechain, which is a protocol that uses nodes of validators to add new blocks to the original Ethereum blockchain, while significantly reducing transaction speeds and costs.

The two main types of chains found on Polygon are the stand-alone and secured chains. Stand-alone chains are directly compatible with Ethereum, while secured chains rely on Polygon’s validation system to connect to its network.

The native token on the Polygon network is MATIC, and users can stake their tokens to validate transactions and vote on network changes.

Founder(s):

Ethereum developers Jaynti Kanani, Sandeep Nailwal, Anurag Arjun, and Mihailo Bjelic launched Polygon (originally named MATIC Network) via ICO in 2019.

Financial Summary: Market Cap: >\$13B **52-week Range:** \$0.01176 – \$2.68 **All-time High:** \$2.68 (May 18, 2021) **Amount In Circulation:** 6,783,681,380 MATIC (out of 10,000,000,000 max)

Binance USD

BUSD



binance.com/en/busd

Description:

Binance USD is a stablecoin pegged to the US dollar at a 1:1 ratio and is approved by the New York State Department of Financial Services (NYDFS).

How It Works:

Each BUSD can be exchanged for 1 US dollar. Whenever an investor converts their US dollars to BUSD, the US dollars are sent to reserves and whenever a BUSD is converted into a US dollar, the BUSD is burned to maintain the supply levels to keep the price fixed at a 1:1 ratio.

Founder(s):

BUSD was launched via a partnership between Binance and Paxos in 2019.

Financial Summary: Market Cap: >\$12B **52-week Range:** \$0.9517 – \$6.29 **All-time High:** \$6.29 (June 14, 2021)

Amount In Circulation: 12,929,324,097 BUSD

Algorand

ALGO



algorand.com

Description:

Algorand is one of many newer blockchains that aims to offer the same features as larger blockchain networks, such as decentralization, transactions without a central authority, and easy-to-divide tokens, but with faster transaction speeds and less computing power necessary to run its blockchain. The native currency on Algorand is the ALGO token.

How It Works:

To increase transaction efficiency, Algorand uses a “pure proof of stake” protocol. Like a proof of stake, Algorand’s protocol requires ALGO holders to stake their tokens to become a validator. However, the main difference between Algorand’s pure proof of stake and a regular proof of stake protocol is that the pure proof of stake randomly selects ALGO holders who then validate the next block in the chain. The holder has a higher chance of being selected to validate a block if they hold a greater amount of ALGO. This way, Algorand is able to add new blocks quicker than other major blockchains, and therefore process transactions with greater efficiency.

Founder(s):

Silvio Micali, a professor at MIT, founded and launched Algorand in 2017.

Financial Summary: Market Cap: >\$12B **52-week Range:** \$0.2221 – \$2.54 **All-time High:** \$3.28 (June 21, 2019)

Amount In Circulation: 6,638,125,177 ALGO (out of 10,000,000,000 max)

Bitcoin Cash

BCH



bch.info

Description:

Bitcoin Cash is a peer-to-peer electronic payment system that offers quick transactions at minimal fees. BCH is an attempt to mimic physical money transactions, as Bitcoin Cash payments are sent directly from one person to another. Since it is an independent blockchain, developers are also able to create tokens on the network.

How It Works:

Bitcoin Cash is a modified version of Bitcoin with its own independent blockchain. Also, the blocks in the BCH chain are larger than those of Bitcoin, meaning that BCH can hold larger amounts of data in fewer blocks, while also enabling lower transaction fees. The developers of Bitcoin Cash push out updates very aggressively, so users of this chain frequently have to update their networks. The high update frequency has also led to the splitting of the BCH blockchain into Bitcoin Cash and Bitcoin SV in 2018.

Founder(s):

An anonymous group of Bitcoin developers modified Bitcoin's code to launch Bitcoin Cash in 2017.

Financial Summary: Market Cap: >\$10B **52-week Range:** \$180.50 – \$1,635.15 **All-time High:** \$4,355.62 (December 20, 2017) **Amount In Circulation:** 18,885,581.25 BCH (out of 21,000,000 max)

Cosmos

ATOM



cosmos.network

Description:

Cosmos is considered to be “the Internet of blockchains,” as it aims to create an ecosystem of “zones” (independent blockchains for crypto networks) that have the ability to share data and tokens seamlessly; one large problem with the blockchain atmosphere now is that there are thousands of independent chains, and only the few larger ones even have the ability to communicate with each other. The central blockchain for Cosmos is known as the Cosmos Hub and is powered by its native ATOM cryptocurrency.

How It Works:

Each new “zone,” or independent blockchain created within Cosmos is connected to the Cosmos Hub, which records and maintains the state of each zone. Developers are able to connect their blockchains without having to program them from scratch to the Cosmos Hub with the Tendermint BFT engine, which is an algorithm that secures the Cosmos software and network, validates transactions, and adds new blocks to the chain.

Cosmos utilized its own version of a proof-of-stake protocol called Tendermint Core. Participants are able to stake ATOM to vote on network changes and help power the blockchain, and the top 100 stake holders of ATOM are able to become validators and earn rewards after they successfully add a new block to the Cosmos blockchain. Zones are connected to the Hub by the Inter-Blockchain Communication protocol (IBC), which allows info to be communicated securely between connected zones. Once a zone has fully integrated into the Cosmos Hub, it can transfer information to other blockchains connected to the Hub, even if the two zones have completely different applications and validators.

Founder(s):

Developers Jae Kwon and Ethan Buchman co-founded the Cosmos network in 2014.

Financial Summary: Market Cap: >\$9B **52-week Range:** \$1.96 – \$44.70 **All-time High:** \$4,355.62 (December 20, 2017) **Amount In Circulation:** 223,692,359.39 ATOM

Axie Infinity

AXS



axieinfinity.com

Description:

Axie Infinity is an Ethereum-based blockchain game inspired by Pokemon. It allows players to collect NFTs of digital pets known as Axies that players can “raise,” “develop,” and trade throughout the expanding Axie network. Axie is one three most popular decentralized gaming applications with over 100,000 unique weekly users, and is designed to provide a way for people to gain exposure to NFTs and blockchain technology.

How It Works:

The two main tokens on the network are Axie Infinity Shards (AXS) and Smooth Love Potions (SLP). AXS is the native governance token used by holders to help influence the development of the Axie network, such as by voting on how treasury funds will be used or how the ecosystem funds are allocated. AXS can also be used to breed new Axies, and will soon have the capability to be staked so stakeholders can earn interest on their staked funds. SLP is solely used in-game by players to “breed,” or create, new Axies.

Founder(s):

An anonymous group of Bitcoin developers modified Bitcoin’s code to launch Bitcoin Cash in 2017.

Financial Summary: Market Cap: >\$9B **52-week Range:** \$0.1234 – \$164.15 **All-time High:** \$164.15 (October 29, 2021) **Amount In Circulation:** 60,907,500 AXS (out of 270,000,000 max)

VeChain

VET



algorand.com

Description:

VeChain is a blockchain network that allows businesses to build and run decentralized applications (dapps). The goal of VeChain is to create a better process for data transfer and supply chain management, as well as other general data solutions. Companies such as BMW, Louis Vuitton, and Walmart utilize the VeChain network to track and maintain different segments of their respective supply chains.

How It Works:

Developers are able to use the VeChain ToolChain, a software development kit created by VeChain developers, to build their dapps. Unlike many major blockchains, VeChain used the proof-of-authority protocol. This means that to become an “Authority Masternode,” or simply an authorized validator, users must stake at least 25 million VET and verify their identity to the VeChain Foundation. The two native cryptocurrencies found on the network are VET coin, which is used to vote on changes to the protocol, and VTHOR, which is used for executing transactions. With this two-token design, VTHOR prices can remain relatively stable to keep computational costs and other fees consistent. VET holders can also stake their tokens to gain the ability to vote on network changes as well as earn VTHOR.

Founder(s):

Sunny Lu and Jay Zhang launched VeChain via an ICO in 2017.

Financial Summary: Market Cap: >\$8B **52-week Range:** \$0.008917 – \$0.2782 **All-time High:** \$0.2782 (April 17, 2021) **Amount In Circulation:** 64,315,576,989 VET (out of 86,712,634,466 max)

Stellar

XLM



algorand.com

Description:

A direct competitor to Ripple, Stellar is an open network that allows money and assets to be held or moved and also allows for financial firms to connect with one another through blockchain technology. The native token on Stellar is called lumens, or XLM, and is used for trading fees and staking.

How It Works:

Stellar is a hard fork of Ripple, so they share many similarities with each other. The main difference that makes Stellar stand apart is its validation consensus system. Transactions that occur in the Stella network are added to a public ledger accessible to anyone, and every node quickly votes on the transaction to validate it. Every node (or participant) who contributed to the global ledger is able to choose its own mini-network of other trusted nodes that it agrees with, and as the mini-networks overlap, an agreement over a transaction is able to quickly be agreed upon and validated.

Founder(s):

Ripple co-founder Jed McCaleb founded Stellar with Joyce Kim in 2013.

Financial Summary: Market Cap: >\$8B **52-week Range:** \$0.07292 – \$0.7965 **All-time High:** \$0.9381 (January 4, 2018) **Amount In Circulation:** 24,156,762,757 XLM (out of 50,001,806,812 max)

Executive Summary

Cryptocurrencies are decentralized networks based on blockchain technology—a distributed ledger enforced by a disparate network of computers. The birth of Bitcoin in 2009 marks the official date that the cryptocurrency was created. With the success of Bitcoin, other cryptocurrencies emerged starting around 2011, such as Litecoin. In 2016, Ethereum became the pioneer in launching through Initial Coin Offerings (ICOs), a fundraising method specific to cryptocurrencies.

More than 10,000 different cryptocurrencies are traded publicly, according to CoinMarketCap.com, a market research website. In addition, cryptocurrencies continue to proliferate, raising money through initial coin offerings, or ICOs. The total value of all cryptocurrencies on Aug. 18, 2021, was more than \$1.9 trillion — down from April high of \$2.2 trillion, according to CoinMarketCap. The total value of all bitcoins, the most popular digital currency, was pegged at about \$849 billion, regaining some ground from recent price lows. Still, the market value of bitcoin is down from April's high of \$1.2 trillion.

We believe that it is impossible to predict which will be the most successful cryptocurrency. In the end, the cryptocurrency market will consolidate leaving 3-5 cryptocurrencies due to these factors:

1. Increase regulations and oversight
2. Sovereign governments creating their own digital currency i.e. China and US
3. Higher interest rates soaking up excess liquidity

Comparative Table Ranked by Market Cap

#	Name	Price	Market Cap	Amount in Circulation ¹	Volume (24h) (11/12/2021)
1	Bitcoin (BTC)	\$64,048.83	\$1,211,068,380,236	18,871,381 BTC	\$37,611,977,705 586,086 BTC
2	Ethereum (ETH)	\$4,656.45	\$551,993,607,515	118,315,907 ETH	\$18,857,268,987 4,041,922 ETH
3	Binance Coin (BNB)	\$624.86	\$104,327,477,335	166,801,148 BNB	\$2,229,773,792 3,565,013 BNB
4	Tether (USDT)	\$1.00	\$73,858,232,190	73,859,886,039 USDT	\$84,754,770,406 84,756,668,252 USDT
5	Cardano (ADA)	\$2.06	\$68,783,913,038	33,298,842,989 ADA	\$2,968,256,687 1,436,956,826 ADA
6	Solana (SOL)	\$230.73	\$70,198,909,230	302,950,106 SOL	\$3,065,500,181 13,229,459 SOL
7	Ripple (XRP)	\$1.19	\$56,322,270,313	47,158,974,920 XRP	\$4,560,432,364 3,818,477,385 XRP
8	Polkadot (DOT)	\$45.88	\$45,324,630,351	987,579,315 DOT	\$2,020,445,192 44,023,522 DOT
9	Shiba Inu (SHIB)	\$0.00005185	\$28,551,657,089	549,095,509,738,3 53 SHIB	\$3,130,362,444 60,202,038,581,536 SHIB
10	Dogecoin (DOGE)	\$0.2581	\$34,313,924,552	132,086,281,527 DOGE	\$1,585,384,502 6,102,698,727 DOGE
11	USD Coin (USDC)	\$1.00	\$34,403,420,616	34,424,351,584 USDC	\$4,908,673,686 4,911,660,113 USDC
12	Terra (LUNA)	\$49.45	\$23,103,350,657	466,918,045 LUNA	\$813,042,849 16,431,572 LUNA
13	Uniswap (UNI)	\$24.51	\$15,425,619,581	627,596,089 UNI	\$296,339,670 12,056,671 UNI
14	Chainlink (LINK)	\$34.45	\$12,428,557,006	465,009,554 LINK	\$1,554,045,408 44,992,356 LINK
15	Avalanche (AVAX)	\$85.13	\$18,806,697,307	220,286,577 AVAX	\$677,947,353 7,940,932 AVAX

16	Wrapped Bitcoin (wBTC)	\$64,168.94	\$15,370,241,301	239,132 WBTC	\$224,401,859 3,491 WBTC
17	Litecoin (LTC)	\$252.17	\$17,508,375,784	68,958,870 LTC	\$4,992,605,188 19,663,984 LTC
18	Polygon (MATIC)	\$1.72	\$11,856,379,178	6,902,890,164 MATIC	\$923,442,096 537,636,260 MATIC
19	Binance USD (BUSD)	0.9997	\$13,530,287,764	13,541,249,920 BUSD	\$6,875,658,944 6,881,229,560 BUSD
20	Algorand (ALGO)	\$2.16	\$13,562,558,666	6,244,121,558 ALGO	\$1,720,770,616 792,232,584 ALGO
21	Bitcoin Cash (BCH)	\$662.81	\$11,882,786,737	18,898,681 BCH	\$1,381,979,606 2,079,910 BCH
22	Cosmos (ATOM)	\$32.00	\$7,202,913,411	224,451,054 ATOM	\$547,449,625 17,059,159 ATOM
23	Axie Infinity (AXS)	\$141.54	\$8,645,948,697	60,907,500 AXS	\$554,438,757 3,905,815 AXS
24	VeChain (VET)	\$0.1592	\$10,293,923,411	64,315,576,989 VET	\$683,925,722 4,273,111,007 VET
25	Stellar (XLM)	\$0.379	\$9,233,143,450	24,286,914,286 XLM	\$810,954,855 2,133,140,372 XLM

1. Amount in Circulation – Coins that have been issued

2. Market Cap = Price * Amount in Circulation

Institutions' Attitudes towards Cryptocurrencies

- a. The U.S. Securities and Exchange Commission (SEC) views cryptos as securities, so crypto investors must report their gains and losses of cryptos and pay taxes accordingly
- b. The Commodities Futures Trading Commission (CFTC): cryptos are commodities and can trade legally under the CFTC's supervision. "Do no harm" approach.
- c. The Bank Secrecy Act: crypto providers must implement the Anti-Money Laundering & Know-Your-Customer (AML/CFT) program. They need to obtain "licensing from the Financial Crimes Enforcement Network," and "payment transmitter licenses from states they operate in." They also need to report transaction records regularly.
- d. "The Financial Crimes Enforcement Network (FinCEN) does not consider cryptocurrencies to be legal tender but considers cryptocurrency exchanges to be money transmitters on the basis that cryptocurrency tokens are 'other value that substitutes for currency.'" They demand sharing the information of the crypto transaction's "originators and beneficiaries."

- e. “The Internal Revenue Service (IRS) does not consider cryptocurrency to be legal tender but defines it as ‘a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value’ and has issued tax guidance accordingly.”
- f. The more detailed regulations vary among states. “The federal government has not exercised its constitutional preemptive power to regulate blockchain to the exclusion of states.” Some states’ legislative branches pass favorable laws in hope that cryptos’ freer development may stimulate the local economy. Some other states passed more restrictive laws, such as preventing the state and its political departments from accepting crypto payments (Iowa).

Resources Referenced

All pricing and financial information:

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