Around the block

Monthly cryptocurrency and blockchain related highlights Jeff Terrell, CFA, Senior Investment Strategy Analyst

Highlights

- 1. Q1 reversal for crypto
- The cryptocurrency ecosystem saw a drastic rebound in Q1 as total market value rebounded from \$795 billion in Q4 to almost \$1.2 trillion.
 While encouraging, it needs to be viewed with a healthy dose of humility against its all-time high of \$3 trillion reached in November 2021.
- The CoinMetrics Total Market Index of 200 tokens (a proxy for the entire ecosystem) rebounded 59% led by bitcoin's 72% gain and surging market cap dominance.
- Digital asset equities' (companies whose primary business supports blockchain related activities) surge this quarter; led by bitcoin mining companies, many of whom own bitcoin as a primary asset.
- The collapse of crypto focused banks Silvergate, Silicon Valley and Signature signify weak business models and risk management practices rather than an indictment on the crypto ecosystem.
- 2. Q2 outlook
- Markets will eagerly watch as the summer budget showdown looms. This is the second time in bitcoin's short history that budget negotiations will match the feverish pitch first experienced in the summer of 2011.
- In 2011, bitcoin rallied from \$1 to \$14 from May to July as the debt ceiling debate ensued. This is less a performance observation as it is a demonstration of bitcoin's sensitivity to fiscal inflection points as bitcoin believers fear the debasement of the U.S. dollar.

Investing in speculative investments, like those related to cryptocurrency, involves a high degree of risk and is not suitable for all investors.

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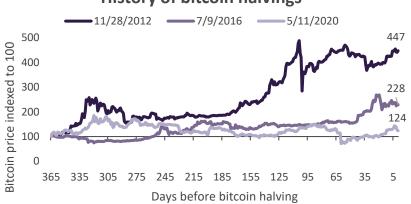
April 14, 2023

Wealth

Chart of the month – Next Bitcoin halving in 2024

Bitcoin's rules dictate that, every 4 years, the quantity of bitcoin created to compensate miners will be cut in half. Only three halvings have occurred in the short history of bitcoin, with the next anticipated to occur in the spring of 2024.

- Anchoring bitcoin's supply growth as it approaches its 21-millioncoin limit is thought to support value due to supply scarcity.
- The year leading up to a bitcoin halving has historically generated positive returns (chart below) while the year after a halving has historically been the best in this loose 4-year cycle.
- Crypto winters have historically occurred in years 2-3, which just concluded for the current cycle.



Data sources: Truist IAG, Coin Metrics

Investment and insurance products:

- Are not FDIC or any other government agency insured
- Are not bank guaranteed
- May lose value

History of bitcoin halvings

Regulatory and non-crypto blockchain developments

Regulatory news

U.S. Treasury releases Illicit Finance Risk Assessment of Decentralized Finance

The U.S. Treasury recently issued their first report specifically focusing on the risks that decentralized finance (DeFi) poses for its existing anti-money laundering (AML) framework. It targets thieves, scammers, ransomware cyber criminals and specifically, the Democratic People's Republic of Korea (DPRK/North Korea). The assessment is not a regulation but rather a recommendation to strengthen AML supervision and enforce existing policies due to the emergence of potential gaps created by DeFi technology.

SEC issues Coinbase a Wells Notice over potential violations

The SEC issued a Wells Notice (notification of suspected securities violations) regarding potential violations whereby the SEC alleges that certain Coinbase staking products may be considered a security and subject to SEC oversight. Separately, the SEC announced it is expanding its Crypto Assets and Cyber Unit

CFTC sues Binance alleging unregistered derivative products

The CFTC (Commodity Futures Trading Commission) sued the largest crypto exchange, Binance, and its founder Changpeng Zhao (CZ) over its alleged offering of "illegal off-exchange commodity options". It alleges that Binance willfully bypassed U.S. law by offering option trading via VPN networks domiciled off-shore but aimed at U.S. investors.

European Union's Markets in Crypto Assets Regulation (MiCA)

The EU is scheduled to vote in April on its MiCA law, anticipated to be a first of its kind law to specifically address customer protection, exchange governance standards and stablecoin reserve requirements.

Industry news

In the aftermath of the FTX bankruptcy and with SEC and CFTC enforcement actions hanging over the heads of Coinbase and Binance, traditional financial institutions are aggressively stepping forward as alternatives for crypto trading and custody.

Some notable examples:

Nasdaq

U.S. exchange Nasdaq has applied to the New York Department of Financial Services for a limited-purpose trust charter to begin offering crypto custody services as soon as the end of Q2. They have signaled intentions to eventually offer trading services as well.

Fidelity

Fidelity has now expanded its crypto custody offering to include the ability to buy/sell bitcoin and ether to its retail clients. This launch is slowly rolling out first to investors who apply from the 36 states that allow it.

Other news

MicroStrategy (MSTR) bitcoin holdings now \$4 billion

Tech company MicroStrategy recently purchased an additional 1,045 bitcoin, bringing its total BTC holdings up to roughly \$4 billion. It has been reported that its holdings are now held at a profit.

Ralph Lauren begins accepting crypto payments

Fashion designer Ralph Lauren has partnered with BitPay to begin accepting cryptocurrency payments at its new Miami Design District location. The three accepted currencies are bitcoin, ether and polygon.



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Performance monitor (3/31/2023)

Crypto and traditional indices

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Bitcoin/Ethereum	Composition	1 Mo	YTD	1 Yr
CMBI Bitcoin		22.1%	71.7%	-37.8%
CMBI Ethereum		11.8%	51.8%	-44.6%
CMBI Btc/Eth	-	18.5%	64.5%	-40.3%
Diversified Baskets				
CMBI 10 Cap Wgt	cap weight	16.2%	60.9%	-46.3%
CMBI 10 Even Wgt	equal weight	2.4%	50.1%	-63.8%
CMBI ex-bitcoin	CMBI 10 - BTC 200 token-cap	8.6%	47.7%	-55.3%
CMBI Total Market	wgt	14.2%	59.1%	-45.7%
MarketVector DA 10	30% coin cap	10.3%	51.0%	-48.3%
MarketVector DA 25	20% coin cap	3.8%	45.5%	-55.8%
MVIS Sector Leaders				
MarketVector Smart Contract Leaders	_	2.4%	52.4%	-69.1%
MarketVector DeFi Leaders		-11.8%	48.6%	-56.5%
MarketVector Med & Ent Leaders MarketVector Infrastrucutre App		-14.2%	39.7%	-82.7%
Leaders	_	-3.7%	57.1%	-52.4%
Equities				
NYSE Factset Global Blockchain	digital equities	10.2%	63.4%	-53.4%
MVIS Global Digital Assets Equity	digital equities	8.9%	70.0%	-70.3%
S&P 500		3.7%	7.5%	-7.7%
MSCI World ex USA		2.2%	8.0%	-2.7%
MSCI EM		3.0%	4.0%	-10.7%
Fixed Income				
Bloomberg US Agg Bond		2.5%	3.0%	-4.8%
Bloomberg US Treasury US TIPS	-	2.9%	3.3%	-6.1%
Commodities				
Bloomberg Commodity		-0.2%	-5.4%	-12.5%
SPDR® Gold Shares		8.5%	9.1%	1.5%

Data sources: Truist IAG, Morningstar, CoinMetrics, Messari

See disclosures for more on index definitions and methodology.



Crypto assets month in review

March cryptocurrency returns generated mixed results led by bitcoin and the smart contract sector. Bitcoin and ether dominated the entire ecosystem with almost 64% of the total market share, the highest since May 2022. The Coin Metrics Total Market index gained 14% for the month.

Bitcoin, founded in the ashes of the 2008 recession, has demonstrated tremendous resiliency in 2023. Its key design feature is as a decentralized alternative to unchecked money creation by global central banks such as the Fed. Despite its year-to-date 72% return, bitcoin remains more than 50% below its all-time high.

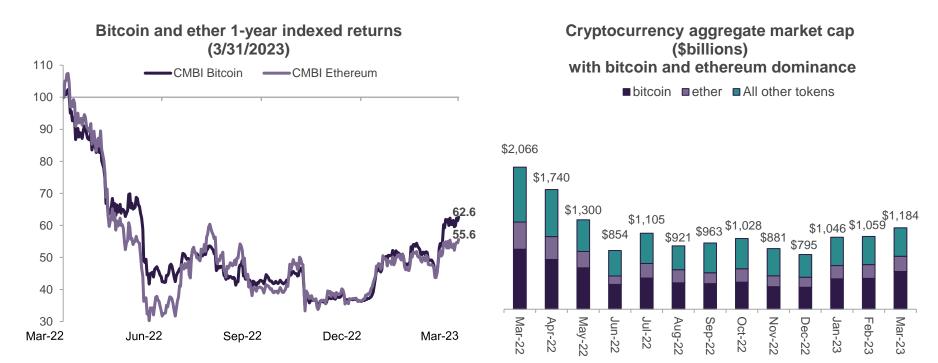
Ethereum continues to lead the smart contract space with many other smart contract blockchains relying on Ethereum's base layer. Smart contracts continue to innovate and grow real economy use cases. Additionally, fears of an ether sell-off after the April 12 Shanghai upgrade, unlocking staked (deposited) ether held by validators, have so far been unfounded as ether has rallied in the post-upgrade hours.

Notable callouts for the month:

- Digital asset equities displayed surprising strength, trading in sync with tech stocks and seemingly shrugging off weakness in the banking sector brought on by troubles at Silvergate, Silicone Valley Bank and Signature Bank.
- The Market Vector Even Weight index generated just a 2.4% return due to its "equal weight" treatment of the largest 10 non-stablecoin tokens, which minimized bitcoin and ether dominance.

Cryptocurrency ecosystem snapshot as of 3/31/23

- Bitcoin and ether remain greater than 40% below their all-time highs despite YTD returns of 41% and 36%, respectively.
- The crypto ecosystem total market value has held above \$1 trillion for two consecutive months for the first time since April-May 2022.



Data sources: Truist IAG, CoinMetrics, Messari



March 2023 top 25 tokens by market cap

Top 25 cryptocurrencies and top five stablecoins: 90% of total crypto ecosystem, bitcoin/ether 64% of total

				MI	kt Cap	Mkt Cap	Cumulative Mkt Cap
Rank	Name	Symbol	Sector			Dominance	
1	Bitcoin	BTC	Currencies	\$	549.4	45.5%	45.5%
2	Ethereum	ETH	Smart Contract	\$	220.0	18.2%	63.7%
3	BNB	BNB	Smart Contract	\$	50.0	4.1%	67.9%
4	XRP	XRP	Currencies	\$	27.6	2.3%	70.2%
5	Cardano	ADA	Smart Contract	\$	14.0	1.2%	71.3%
6	Dogecoin	DOGE	Currencies	\$	10.7	0.9%	72.2%
7	Lido Staked Ether	STETH		\$	10.7	0.9%	73.1%
8	Polygon	MATIC	Scaling	\$	10.1	0.8%	73.9%
9	Solana	SOL	Smart Contract	\$	8.1	0.7%	74.6%
10	Polkadot	DOT	Smart Contract	\$	7.7	0.6%	75.2%
11	Litecoin	LTC	Currencies	\$	6.5	0.5%	75.8%
12	Shiba Inu	SHIB		\$	6.3	0.5%	76.3%
13	TRON	TRX	Smart Contract	\$	6.0	0.5%	76.8%
14	Avalanche	AVAX	Smart Contract	\$	5.8	0.5%	77.3%
15	Uniswap	UNI	Exchanges	\$	4.6	0.4%	77.7%
16	Wrapped Bitcoin	WBTC		\$	4.3	0.4%	78.0%
17	Chainlink	LINK	Data Mgmt	\$	3.9	0.3%	78.3%
18	Unus Sed Leo	LEO	Exchanges	\$	3.3	0.3%	78.6%
19	The Open Network	TONCOIN		\$	3.3	0.3%	78.9%
20	Cosmos	ATOM	Smart Contract	\$	3.2	0.3%	79.1%
21	Stellar	XLM	Currencies	\$	2.9	0.2%	79.4%
22	Ethereum Classic	ETC	Smart Contract	\$	2.9	0.2%	79.6%
23	Monero	XMR	Currencies	\$	2.9	0.2%	79.9%
24	OKB	OKB	Exchanges	\$	2.5	0.2%	80.1%
25	Bitcoin Cash	BCH	Currencies	\$	2.4	0.2%	80.3%
	Top 5 Stablecoins						
	Tether	USDT	Stablecoins	\$	79.6	6.6%	6.6%
	USD Coin	USDC	Stablecoins	\$	32.9	2.7%	9.3%
	Binance USD	BUSD	Stablecoins	\$	7.6	0.6%	9.9%

Stablecoins

Stablecoins

\$

\$

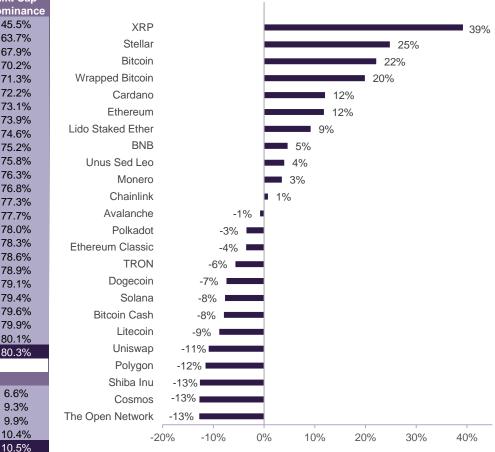
5.1

2.0

0.4%

0.2%

Top 25 March 2023 performance rankings





DAI

TUSD

Dai

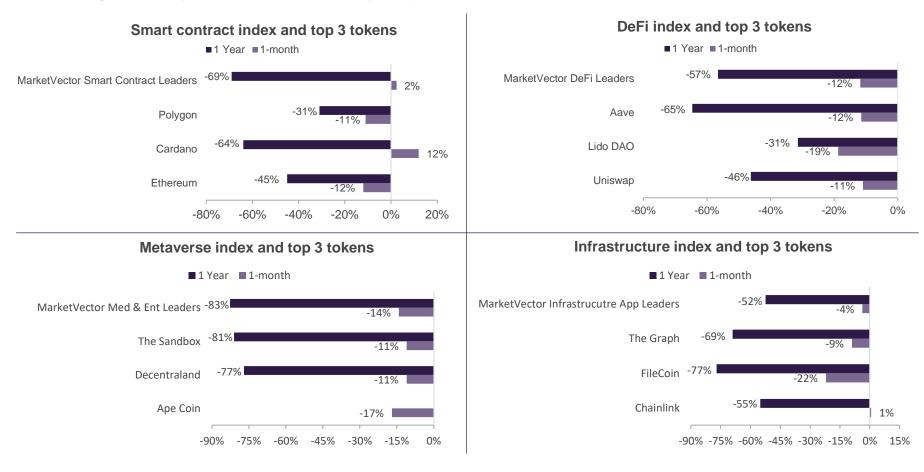
TrueUSD



Wealth

Key crypto sectors 2/28/2023

Differentiating between crypto sectors provides industry perspective similar to sectors within the S&P 500.



Data sources: Truist IAG, MVIS CryptoCompare, Messari, Morningstar.

See disclosures for more on index definitions and methodology.



Digital glossary

Digital technologies

Cryptocurrency refers to cryptographic currencies like bitcoin and alternative coins or 'altcoins', launched after the success of bitcoin. This category of digital assets is designed to work as a medium of exchange, store of value, or to power applications.

Token is a subset of cryptocurrencies. Tokens are units of value issued by platforms built on top of existing blockchains.

Bitcoin was the first system of global, decentralized, scarce, digital money as initially introduced in a white paper titled Bitcoin: A Peer-to-Peer Electronic Cash System by Satoshi Nakamoto.

Ethereum is a decentralized, public blockchain network that supports compostable smart contracts which can support decentralized applications as well as peer-to-peer transfers. "ether" is the native cryptocurrency of the Ethereum network.

Stablecoins are the tokens designed to track the value of an off-chain asset, such as a fiat money or exchange traded commodity, most commonly U.S. dollars.

Smart contract is a software, typically carried on a decentralized public blockchain, that can execute or enforce pre-determined actions or agreements without the intervention of a centralized intermediary.

DeFi means decentralized finance; a peer-to-peer software-based network of protocols that can be used to facilitate traditional financial services like borrowing, lending, trading derivatives, insurance and more through noncustodial smart contracts carried on public blockchain networks.

NFT means non-fungible tokens. For example, money (or a single unit of bitcoin) is fungible—each one unit is considered equal to any other unit of identical size. Conversely, artwork is not fungible—no two paintings are identical. Non-fungible tokens represent unique digital property, whether a collectible, artwork, intellectual property, or something else.

Metaverse is a network of 3D virtual worlds focused on social connection. This can include virtual reality, augmented reality, and the digital economy.

Central Bank Digital Currency (CBDC) is a digital version of a government-issued fiat currency that's managed by a central bank.

Web 3.0 is the third generation of the internet where technologies such as machine learning, decentralized ledgers, and artificial intelligence allow for a transparent environment that does not rely on central entities to manage and distribute content.

Data sources: Truist IAG, Galaxy Digital



Digital glossary

Digital technology concepts

Digital asset is any digital asset built using blockchain technology, including cryptocurrencies, stablecoins, non-fungible digital collectibles (NFTs) and security tokens.

Exchanges are platforms where you can buy and sell cryptocurrencies. Notable exchanges include Coinbase and Binance.

Decentralization is the process of removing intermediaries in a process and pushing power over a system out to the edges of the system, or to the users as a collective.

Public ledger is a transparent, distributed digital record of transactions that can be downloaded by anyone around the world.

Blockchain means a cryptographically secure digital ledger that maintains a record of all transactions that occur on the network and follows a consensus protocol for confirming new blocks to be added to the blockchain.

Block is a batch of confirmed transactions on the digital ledger. Blocks are added to an existing blockchain as transactions occur on the network. Miners are rewarded for "mining" a new block and sometimes awarded a token.

Mining is the process by which new blocks are created, and thus new transactions are added to the blockchain. The term "miner" typically refers to an entity that participates in block production on a Proof of Work network, whereas "validator" typically refers to an entity that participates in block production on a Proof of Stake network.

Double spend means the act of spending the same coin twice. If money can be double spent, it cannot function properly as it loses its scarcity and counterparties cannot trust that they alone have received payment. Solving the double-spend problem without the use of a central intermediary had never been accomplished until Bitcoin.

Address is a payment instruction for a digital asset. When receiving a payment, the recipient communicates their address to the payer, and the payer can send funds to that address.

Wallet is a tool that stores public and private keys and enables the user to use those keys to interact with a blockchain network. Wallets can be software, hardware, or physical (paper, metal, etc.).

Cold storage means the storage of private keys in any fashion that is disconnected from the internet. Common cold storage examples include offline computers, USB drives, or paper records.

Private key in asymmetric cryptography is a piece of data held in secret by an entity. It is used to compute digital signatures upon other data that can be verified by a third-party cheaply simply by knowing the public key.

Public keys are used with digital signatures to validate that the holder of a cryptocurrency coin did legitimately authorize the transfer of that coin to a new address or entity.

Fork is an event in open source software development when part of a community breaks away by making changes to the software.

Data sources: Truist IAG, Galaxy Digital



Disclosures

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Asset classes are represented by the following indexes. An investment cannot be made directly into an index.

U.S. Large Cap Equity is represented by the S&P 500 Index which is an unmanaged index comprised of 500 widely-held securities considered to be representative of the stock market in general.

Emerging Markets is represented by the MSCI Emerging Markets Index captures large and mid cap representation across 24 Emerging Markets (EM) countries. With 1,125 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI World ex USA Index captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries--excluding the United States. With 910 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

U.S. Core Taxable Bonds are represented by the Bloomberg U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).

The Bloomberg Barclays US Treasury Inflation-Linked Bond Index measures the performance of the US Treasury Inflation Protected Securities (TIPS) market. Federal Reserve holdings of US TIPS are excluded from the index.

Commodities are represented by the Bloomberg Commodity Index which is a composition of futures contracts on physical commodities. It currently includes a diversified mix of commodities in five sectors including energy, agriculture, industrial metals, precious metals and livestock. The weightings of the commodities are calculated in accordance with rules that ensure that the relative proportion of each of the underlying individual commodities reflects its global economic significance and market liquidity.

The Coin Metrics Bletchley Index (CMBI) Bitcoin is a cryptoasset benchmark designed to measure the performance an investor would expect from purchasing and holding Bitcoin. The benchmark represents a market aggregate USD value for Bitcoin. It aggregates data from the major global BTC/USD markets that conform to the Coin Metrics Market Selection Framework.

The Coin Metrics Bletchley Index (CMBI) Ethereum is a cryptoasset benchmark designed to measure the performance an investor would expect from purchasing and holding Ether. The benchmark represents a market aggregate USD value for Ether. It aggregates data from the major global ETH/USD markets that conform to the Coin Metrics Market Selection Framework.

The Coin Metrics Bletchley Index (CMBI) Bitcoin and Ethereum is a cryptoasset benchmark designed to measure the performance of a portfolio of Bitcoin and Ethereum, weighted by their free float market capitalization. It aggregates data from the major global BTC/USD and ETTH/USD markets that conform to the Coin Metrics Market Selection Framework.

The **CMBI 10** is designed to measure the performance an investor would expect from investing in a diversified basket of crypto assets, weighted by their free float market capitalization. The 10 largest crypto assets, defined by an asset's expected 10 year future market capitalization, are selected as the index constituents.

The **CMBI 10 Even** offers an alternative to the CMBI 10 market cap weighted indexes. Even weighting strategies reflect the performance an investor would expect from investing an equal amount in a diversified basket of the largest crypto assets. Equal weighting is one of the oldest and best known methods of factor investing and aims to overcome weighting concentrating an index too heavily in a few large assets.



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The **CMBI 10 Excluding Bitcoin** is designed to measure the performance an investor would expect from investing in a diversified basket of the largest non-Bitcoin crypto assets, weighted by their free float market capitalization. As Bitcoin is often an investor's first exposure to crypto assets, the CMBI10EX was designed to provide a simple mechanism to diversify into other large cap crypto assets. The same constituents as the CMBI10, with the exception of Bitcoin, are selected as the index constituents.

The MVIS CryptoCompare Smart Contract Leaders Index is designed to track the performance of the largest and most liquid smart contract assets, and is an investable subset of MVIS CryptoCompare Smart Contract Index.

The MVIS CryptoCompare Decentralized Finance Leaders Index is designed to track the performance of the largest and most liquid decentralized finance assets, and is an investable subset of MVIS CryptoCompare Decentralized Finance Index.

The MVIS CryptoCompare Media and Entertainment Leaders Index is designed to track the performance of the largest and most liquid media & entertainment assets, and is an investable subset of MVIS CryptoCompare Media & Entertainment Index.

The MVIS CryptoCompare Infrastructure Application Leaders Index is designed to track the performance of the largest and most liquid infrastructure application assets, and is an investable subset of MVIS CryptoCompare Infrastructure Application Index.

The MVIS Global Digital Assets Equity Index tracks the performance of the largest and most liquid companies in the digital assets industry. This is a modified market capweighted index, and only includes companies that generate at least 50% of their revenue from digital asset services and products, such as exchanges, payment gateways, mining operations, software services, equipment and technology, digital asset infrastructure, or the facilitation of commerce with the use of digital assets. MVDAPP covers at least 90% of the investable universe.

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