

Around the block

Monthly cryptocurrency and blockchain related highlights from the Truist Investment Advisory Group

April 19, 2022

Off the block

Cryptocurrencies generated impressive double digit returns in March adding to the gains from February. This month we touch on three key topics:

- **Smart contracts** led all sectors in March with outsized gains enjoyed by Solana, Cardano and Ethereum. Smart contracts are coded software protocols upon which crypto applications reside. They are analogous to iOS or Android operating systems used by Apple and Samsung smart phones. Smart contracts are the rails upon which crypto apps and commercial supply chain contracts, used by firms like Walmart and Honeywell, are executed. In an important milestone, Ethereum, the largest smart contract provider, will soon undergo its largest makeover, (the “merge”). This is expected to transform the scalability and environmental soundness of its protocol. All eyes will be on its execution.
- On March 9th, President Biden signed his **Executive Order on Ensuring Responsible Development of Digital Assets**. The order outlines a “whole of government” approach to establishing a national digital asset regulatory framework addressing: investor protection, financial stability, illicit finance, U.S. competitiveness, financial inclusion, and responsible innovation. Respective government agencies were tasked with developing frameworks over the next several months.
- The U.S. Treasury’s OFAC office warned that a North Korean state-sponsored group know as the **Lazarus Group** was tied to a recent \$625 million cryptocurrency theft by stealing cryptographic keys and breaching the Axie Infinity digital game. This hack exemplifies the urgency to craft comprehensive digital asset regulation.

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Industry developments

- Exxon is running a pilot project with Crusoe Energy in the Bakken shale basin utilizing excess natural gas “flare” from oil wells to power Bitcoin mining servers.
- Fintech leader FIS announced a partnership with Fireblocks to provide enterprise-grade digital asset investing, wallet technology, and decentralized finance solutions to its capital markets clients.
- AMC Theatres announces their mobile app has added Dogecoin and Shiba Inu to its roster of cryptocurrencies it will accept for payments.
- Mastercard is partnering with crypto lender Nexo to launch the first “crypto backed” payment card allowing users to pledge their crypto as collateral.

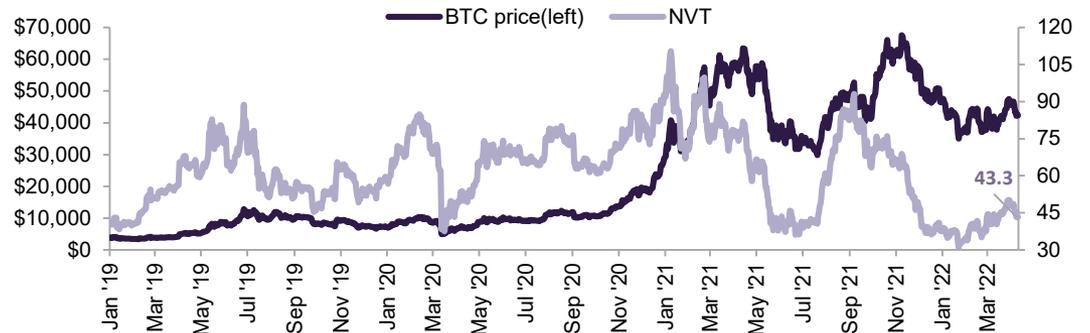
Regulatory developments

- Senator Pat Toomey (PA) released a draft bill of his proposed Stablecoin TRUST Act of 2022 to establish a federal stablecoin framework.
- Senators Gillibrand (Dem-NY) and Lummis (Rep-WY) are working on a bi-partisan regulatory framework for cryptocurrencies jointly regulated by the CFTC and SEC among others.
- Virginia unanimously passes House Bill 263 permitting state-chartered banks to provide cryptocurrency custody services.
- President Biden will nominate Michael Barr, a former advisor to crypto firm Ripple, as Federal Reserve vice chair of supervision.

Chart of the month – A Crypto price/earnings ratio?

The NVT (Network Value/Transaction Value) is floated as a potential solution in valuation frameworks. The “free float” network value for bitcoin eliminates lost and inactive coins. The transaction value measured on the Bitcoin blockchain tells us the value of bitcoin transactions over the network. A high NVT ratio (above 70) often indicates overvaluation with little network activity similar to a high Price-to-Earnings ratio (PE). A low NVT ratio (30) often indicates a pickup in network activity not yet reflected in BTC price, similar to a low PE in stock valuation.

Bitcoin free float NVT (Network Value/Transaction Value)



Data sources: Truist IAG, CoinMetrics



Wealth

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

Performance monitor (03/31/22)

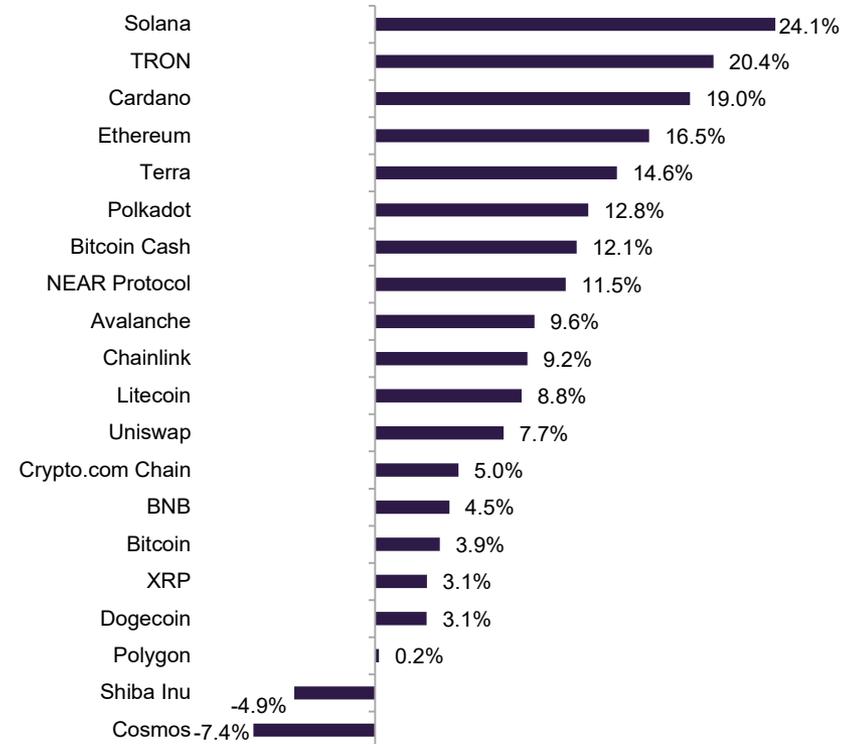
Crypto and traditional indices

		1 Mo	YTD	1 Yr
Bitcoin/Ethereum				
CMBI Bitcoin		9.6%	-0.5%	-22.7%
CMBI Ethereum		17.6%	-9.7%	72.7%
CMBI Btc/Eth		11.9%	-4.1%	-4.0%
Diversified Baskets				
CMBI 10 Cap Wgt	cap weight	12.8%	-5.8%	-3.4%
CMBI 10 Even Wgt	equal weight	15.5%	-11.7%	9.6%
CMBI ex-bitcoin	CMBI 10 - BTC	16.5%	-11.1%	44.4%
MVIS CryptoCompare DA 10	30% coin cap	15.2%	-11.2%	16.8%
MVIS CryptoCompare DA 25	20% coin cap	14.2%	-15.2%	16.1%
MVIS Sector Leaders				
Smart Contracts		20.8%	-12.9%	46.0%
DeFi		19.5%	-34.3%	-56.8%
Media and Entertainment		12.4%	-30.8%	-16.8%
Infrastructure		15.4%	-27.8%	-31.7%
Equities				
MVIS Global Digital Assets Equity		3.6%	-19.2%	-52.5%
S&P 500		3.7%	-4.6%	15.6%
MSCI World ex USA		1.2%	-4.8%	3.0%
MSCI EM		-2.3%	-7.0%	-11.4%
Fixed Income				
Bloomberg US Agg Bond		-2.8%	-5.9%	-4.2%
Bloomberg US Treasury US TIPS		-1.9%	-3.0%	4.3%
Commodities				
Bloomberg Commodity		8.6%	25.5%	49.3%
SPDR® Gold Shares		1.7%	6.6%	14.4%

Data sources: Truist IAG, Morningstar, Coin Metrics, Messari
See disclosures for more on index definitions and methodology.

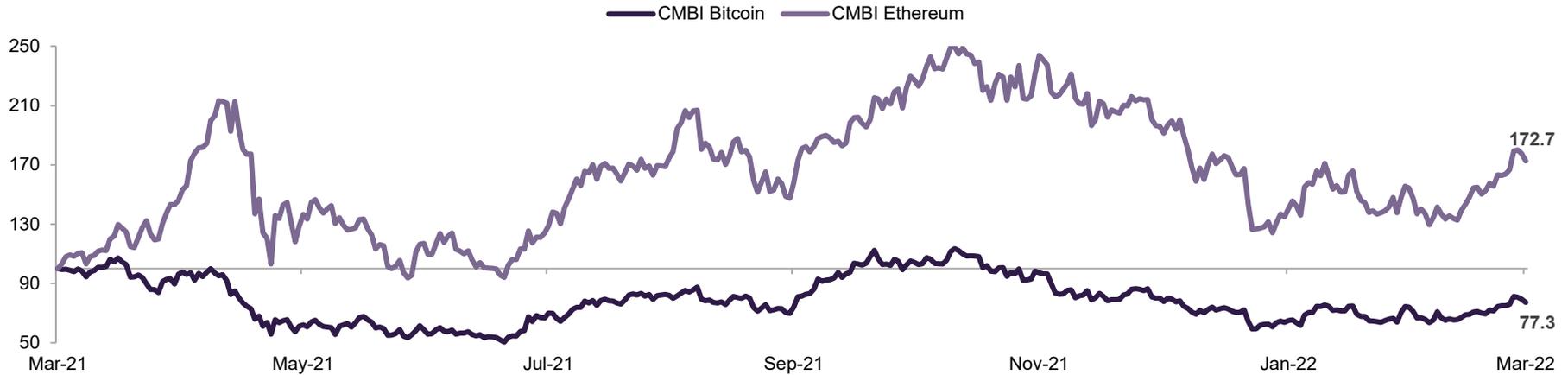
Top 20 crypto March performance rankings

Top 20 tokens MTD returns (03/31/22)

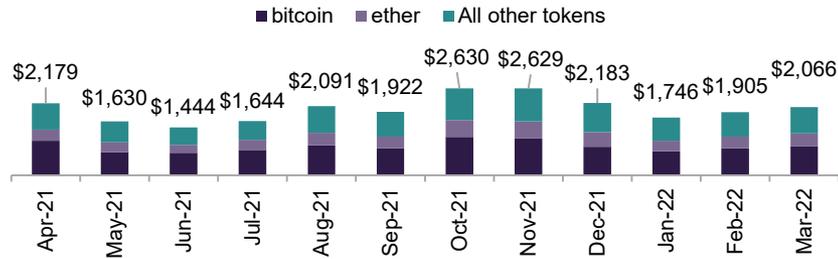


Cryptocurrency ecosystem snapshot

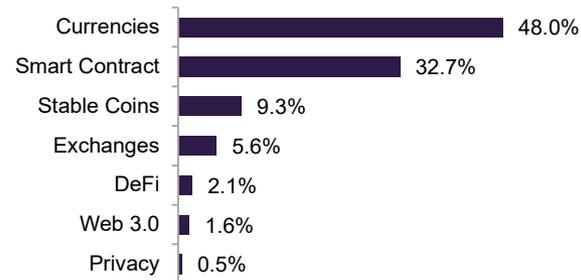
Bitcoin and other 1-year indexed returns (03/31/22)



Cryptocurrency aggregate market cap (\$billions) with bitcoin and ethereum dominance



Cryptocurrency ecosystem sectors (03/31/2022)

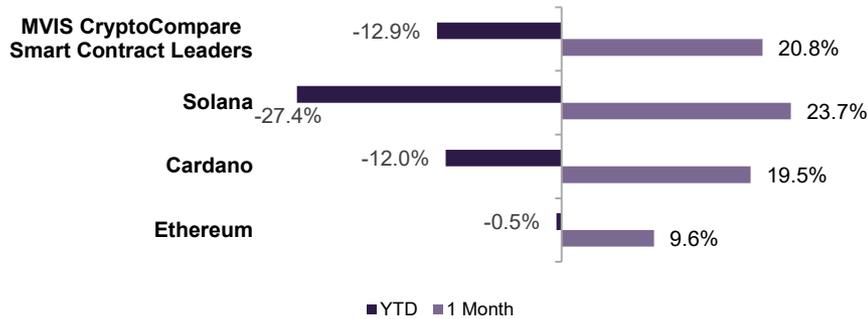


Data sources: Truist IAG, CoinMetrics, Messari

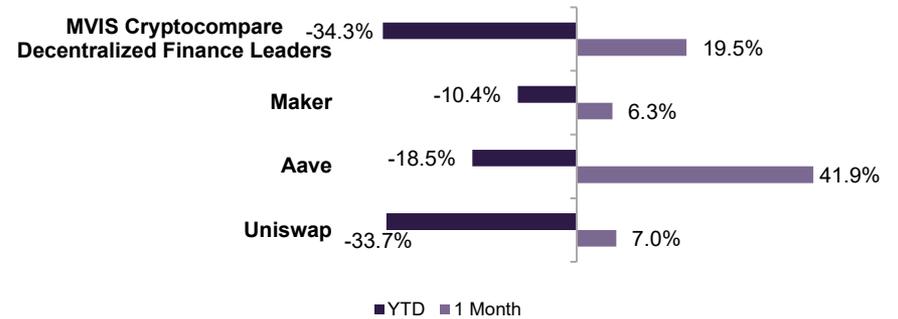
Key crypto sectors

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

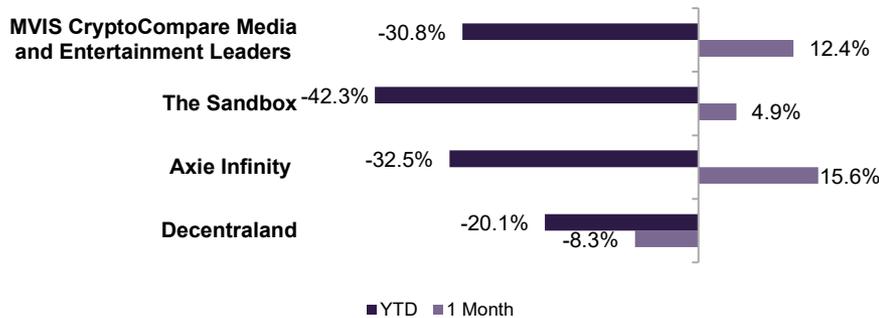
Smart contract index and top three tokens (3/31/2022)



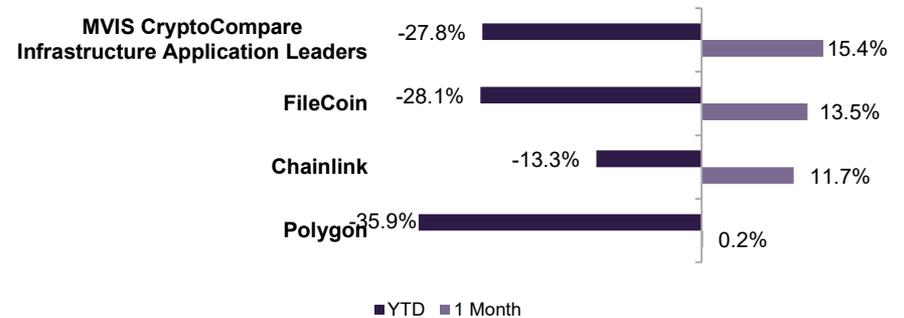
DeFi index and top three tokens (3-31-2022)



Metaverse index and top three tokens (3/31/2022)



Infrastructure index and top three tokens (3/31/2022)



Data sources: Truist IAG, MVIS CryptoCompare, Messari, Morningstar. Data as of 03/31/22.

See disclosures for more on index definitions and methodology.

March 2022 top 20 tokens by market cap

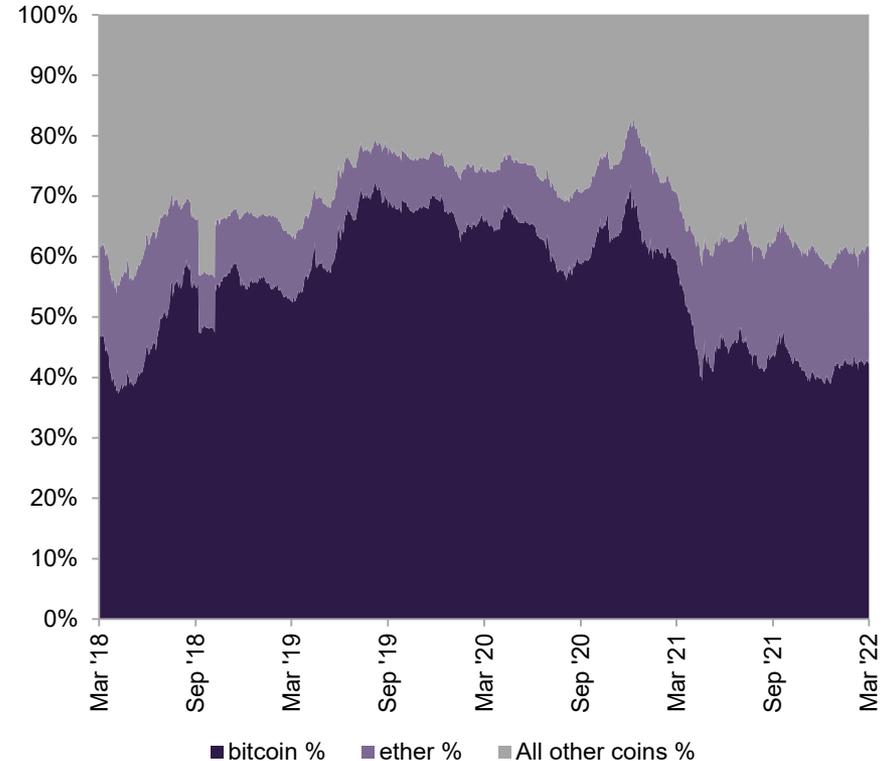
Top 20 cryptocurrencies and top five stablecoins:
over 88% of total crypto market cap

Name	Symbol	Sector	Mkt Cap (\$billions)	Mkt Cap Dominance	Cumulative Mkt Cap Dominance
Bitcoin	BTC	Currencies	\$ 872.5	42.2%	42.2%
Ethereum	ETH	Smart Contract Platforms	\$ 396.3	19.2%	61.4%
BNB	BNB	Centralized Exchanges	\$ 71.1	3.4%	64.9%
Solana	SOL	Smart Contract Platforms	\$ 40.5	2.0%	66.8%
XRP	XRP	Currencies	\$ 39.2	1.9%	68.7%
Cardano	ADA	Smart Contract Platforms	\$ 39.0	1.9%	70.6%
Terra	LUNA	Smart Contract Platforms	\$ 36.9	1.8%	72.4%
Avalanche	AVAX	Smart Contract Platforms	\$ 25.6	1.2%	73.7%
Polkadot	DOT	Smart Contract Platforms	\$ 21.3	1.0%	74.7%
Dogecoin	DOGE	Currencies	\$ 18.5	0.9%	75.6%
Shiba Inu	SHIB	Meme	\$ 14.3	0.7%	76.3%
Polygon	MATIC	Scaling	\$ 12.6	0.6%	76.9%
Crypto.com Chain	CRO	Payment Platforms	\$ 11.7	0.6%	77.4%
NEAR Protocol	NEAR	Smart Contract Platforms	\$ 8.8	0.4%	77.9%
Litecoin	LTC	Currencies	\$ 8.7	0.4%	78.3%
Cosmos	ATOM	Smart Contract Platforms	\$ 8.3	0.4%	78.7%
Chainlink	LINK	Data Management	\$ 7.9	0.4%	79.1%
Uniswap	UNI	Decentralized Exchanges	\$ 7.8	0.4%	79.5%
TRON	TRX	Smart Contract Platforms	\$ 7.7	0.4%	79.8%
Bitcoin Cash	BCH	Currencies	\$ 7.1	0.3%	80.2%

Top 5 Stablecoins					
Tether	USDT	Stablecoins	\$ 81.7	4.0%	4.0%
USD Coin	USDC	Stablecoins	\$ 51.8	2.5%	6.5%
Binance USD	BUSD	Stablecoins	\$ 17.5	0.8%	7.3%
TerraUSD	UST	Stablecoins	\$ 16.3	0.8%	8.1%
Dai	DAI	Stablecoins	\$ 9.7	0.5%	8.6%

bitcoin and ether market cap 61% of ecosystem

Market cap dominance (March 2022)



Data sources: Truist IAG, Messari

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 composable 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 non-custodial 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 ETH/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.

Disclosures

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 cap-weighted 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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