

Monthly Digital Assets Market Report

May 2023

ETC Group Physical Bitcoin
 ETC Group Physical Ethereum
 ETC Group Physical Litecoin
 ETC Group Physical XRP

BTCE ETC Group Physical Solana
ZETH ETC Group Physical Cardano
ELTC ETC Group Physical Polygon
GXRP ETC Group Physical Polkadot

ESOL
RDAN
MTCE
PLKA

ETC Group Digital Assets and Blockchain
 Equity UCITS ETF

KOIN ETC Group Global Metaverse UCITS ETF

METR

For Professional Clients Only. Capital at risk.

All data as of 30/04/2023

This report was written by, and is the opinion of, ETC Group.

Key Takeaways

- BTC, ETH outperform on risk-adjusted basis
- Ordinals, BRC-20 developments spike Bitcoin fees to ATH
- Ethereum derisked as staking withdrawals unlocked

Macro Outlook

BTC, ETH outperform on risk-adjusted basis

After a buoyant March which saw the total crypto market cap climb back above \$1.1 trillion, April represented more of a momentum pause than a continued upward climb.

Still, year-to-date gains of more than 66% for ETC Group's Bitcoin ETP BTCE and over 53% for its Ethereum ETP ZETH compare favourably with popular portfolio diversifiers such as stock indices like the S&P 500 (+7.1%) and the Nikkei 225 (+8.3%) as well as gold (+11.4%), oil (-13.1%) and silver (+6.4%).

BTCE remains the largest physically-backed Bitcoin product in Europe, with more than \$500m in assets under management, and is due to celebrate its three-year anniversary of listing on Deutsche Börse XETRA in June.

So, while crypto markets chopped sideways across the month, the increased volatility evident in global equities, crashing oil and energy prices, and both industrial and precious metals flat in the year to date, both Bitcoin and Ethereum continued to show broad risk-adjusted outperformance.

The 90-day Sortino ratio to 4 May 2023 shows Bitcoin's risk-adjusted returns at 0.24 with gold taking second spot at 0.19, silver in third at 0.16 and Ethereum fourth at 0.15.

The Sortino ratio is an extension of the classic Sharpe ratio for portfolio management. It takes an asset's return and subtracts the risk-free rate, then divides that by the asset's downside deviation.

Copper, considered a bellwether metal for the health of the global economy, produced a negative risk-adjusted return over the last three months, alongside the S&P 500, oil, natural gas and battery metals.

For more crypto insights visit <https://www.etc-group.com/blog/>

Sources available upon request. **All performance figures are showing net data.** Please remember that digital assets can be highly volatile, and your capital is at risk. Past performance is not indicative of future performance.

Ordinals, BRC-20 developments spike Bitcoin fees to ATH

Bitcoin has more recently been coasting in a fairly tight range between \$27,500 and \$29,000 as investors consider the impact of interest rate rises from both the US Federal Reserve and the European Central Bank, alongside the potential for contagion in the US banking system.

But beyond price action there were important technological developments also occurring. Bitcoin saw a dramatic increase in fee revenue for miners in April due to new technological developments on the blockchain. One of the main criticisms levelled at Bitcoin as other blockchains have arisen over the last 10 years is that it can only host one asset: BTC. Compare this to Ethereum, for example, upon which an effectively infinite number of new assets can be created, hosted, and traded.

Novel scripting and coding developments now mean that Bitcoin could be about to reverse that trend. Firstly, Bitcoin's own version of NFTs, called Ordinals, saw rapid uptake across the month with more than 2 million Ordinals created.

Ordinals were created in late 2022 by researcher Casey Rodarmor. They allow users to inscribe individual satoshis — the smallest unit of a Bitcoin — with additional data, such as text, images, audio, or video files, thereby creating unique and non-fungible assets that can themselves be traded.

The second intriguing development in Bitcoin coding is the rise of so-called 'BRC-20' tokens. BRC-20 tokens utilise the same format as Ordinals to create fungible tokens on top of Bitcoin, using inscriptions to store new types of tokens on top of individual satoshis.

The parabolic growth of both Ordinals and BRC-20 tokens contributed to a new record: on 30 April the Bitcoin network processed more transactions in a single day than at any point since its creation in 2008.

Ethereum derisked as Shapella unlocks staking withdrawals

On 12 April, Ethereum successfully completed its most recent network upgrade (called 'Shapella') which allows investors to withdraw staking rewards. This concludes a years-long move to end Proof of Work mining on the second largest blockchain by market cap and replace it with the newer Proof of Stake consensus mechanism.

Since December 2020 Ethereum has allowed investors to lock up ETH to support the blockchain's security model, amassing yield in the form of more ETH as a result. But investors have had to wait until withdrawals were enacted, a state of affairs that created an entirely new market in liquid staking derivatives.

The change in the Shapella hard fork has at once enabled a mass de-risking of Ethereum: firstly, from the successful completion of another technically complex upgrade and secondly by attracting new investors in the knowledge that they face a lower opportunity cost and liquidity risk from staking Ethereum.

Critics had suggested that Ethereum could see a mass price depreciation in the weeks after Shapella with validators pulling their accumulated rewards out of the network and depositing them on the market.

But those fears of oversupply and demand shock have proved unfounded, with Ethereum holding steady above \$1,800.

In the intervening weeks after Shapella, the fees to use Ethereum have broadly risen, with demand coming from new token launches and decentralised apps like Uniswap vying for blockspace.

And on a macro level, amid nervousness over the state of the US banking system, central banks raising rates into brittle markets and the broad injection of positivity from the EU's 20 April passing of its bloc-wide Markets in Crypto Assets (MiCA) regulation, there remain multiple tailwinds for digital assets as we enter the second quarter of the year.

Sources available upon request. Please remember that digital assets can be highly volatile, and your capital is at risk.

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Featured Products Performance

As of 30.04.2023

	1M	3M	6M	YTD	12M	SI
ETC Group Physical Bitcoin	1.54%	25.02%	41.10%	74.38%	-25.85%	182.40%
<i>Bitcoin</i>	3.37%	27.17%	44.11%	76.92%	-23.49%	199.08%
ETC Group Physical Ethereum	2.18%	18.03%	19.50%	56.78%	-33.69%	18.89%
<i>Ether (Ethereum)</i>	3.78%	19.36%	21.21%	57.94%	-32.22%	21.42%
ETC Group Digital Assets and Blockchain Equity UCITS ETF	-0.01%	5.83%	-2.48%	37.85%	-40.45%	-78.56%
<i>Solactive ETC Group Digital Assets and Blockchain Equity Index NTR</i>	0.04%	6.01%	-1.99%	38.30%	-39.99%	-78.37%
ETC Group Global Metaverse UCITS ETF	-5.46%	1.05%	15.35%	19.00%	-1.96%	-5.84%
<i>Solactive ETC Group Global Metaverse Index</i>	-5.41%	1.22%	15.76%	19.31%	-1.45%	-5.36%

Please note that all performance figures are showing net data. Source: Bloomberg / HANetf. Data as of 30/04/2023
Performance before inception is based on back tested data. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance. Past performance for the index is in USD. Past performance is not an indicator for future results and should not be the sole factor of consideration when selecting a product. Investors should read the prospectus of the Issuer ("Prospectus") before investing and should refer to the section of the Prospectus entitled 'Risk Factors' for further details of risks associated with an investment in this product. When you invest in ETFs and ETCs, your capital is at risk.

Featured Product Details

Visit the [BTCE Fund Page](#) for more information

Exchange	BBG Code	RIC	ISIN	Valoren	SEDOL	Currency	TER
Deutsche Boerse Xetra	BTCE GY	BTCE.DE	DE000A27Z304	-	BMWSLR9	USD	2.00%
SIX Swiss Exchange	BTCE SW	BTCEUSD.S	DE000A27Z304	55503260	BLB3S55	USD	2.00%
SIX Swiss Exchange	BTCEGBP SW	BTCEGBP.S	DE000A27Z304	55503260	BLB3S66	GBP	2.00%
SIX Swiss Exchange	BTCECHF SW	BTCECHF.S	DE000A27Z304	55503260	BLB3S77	CHF	2.00%
Euronext Paris	BTCEEUR:FP	BTCE.PA	DE000A27Z304	-	BN0ZB02	EUR	2.00%
Euronext Amsterdam	BTCEUSD:NA	BTCE.AS	DE000A27Z304	-	BN0ZB13	EUR	2.00%
CBOE	BTCEd I2	BTCEd.DXE	DE000A27Z304	-	BNM7CN6	EUR	2.00%

Visit the [ZETH Fund Page](#) for more information

Exchange	BBG Code	RIC	ISIN	Valoren	SEDOL	Currency	TER
Deutsche Boerse Xetra	ZETH GY	ZETH.DE	DE000A3GMKD7	-	BMV2RQ3	EUR	1.49%
SIX	ZETH SE	ZETHUSD.S	DE000A3GMKD7	110488627	BN0WR83	USD	1.49%
SIX	ZETHCHF SW	ZETHCHF.S	DE000A3GMKD7	110488627	BN0WRB6	CHF	1.49%
SIX	ZETHGBP SW	ZETHGBP.S	DE000A3GMKD7	110488627	BN0WR94	GBP	1.49%
Euronext Paris	ZETH FP	ZETH.PA	DE000A3GMKD7	-	BN0Z9Y2	EUR	1.49%
Euronext Amsterdam	ZETH NA	ZETH.AS	DE000A3GMKD7	-	BN0Z9Z3	USD	1.49%

Visit the [KOIN Fund Page](#) for more information

Exchange	BBG Code	RIC	ISIN	Valoren	SEDOL	Currency	TER
London Stock Exchange	KOIN LN	KOIN.L	IE00BMQ8YK98	-	BMBTJ46	USD	0.60%
London Stock Exchange	KOIP LN	KOIP.L	IE00BMQ8YK98	-	BN4MYX3	GBP	0.60%
Borsa Italiana	KOIN IM	KOIN.MI	IE00BMQ8YK98	-	BMXR829	EUR	0.60%
Deutsche Boerse Xetra	KO1N GY	KO1N.DE	IE00BMQ8YK98	-	BMXR807	EUR	0.60%
SIX	KOIN SW	KOIN.S	IE00BMQ8YK98	112518685	BMX8DD8	CHF	0.60%
Euronext Paris	KOIN FP	KOIN.PA	IE00BMQ8YK98	-	BMD2GJ7	EUR	0.60%

Visit the [METR Fund Page](#) for more information

Exchange	BBG Code	RIC	ISIN	SEDOL	Currency	TER
London Stock Exchange	METR LN	METR.L	IE000KDY1003	BMV7W41	BMV7W41	0.65%
London Stock Exchange	METP LN	METP.L	IE000KDY1003	BMV7ZZ3	BMV7ZZ3	0.65%
Deutsche Boerse Xetra	M37R GY	M37R.DE	IE000KDY1003	BMCDV18	BMCDV18	0.65%
Borsa Italiana	METR IM	METR.MI	IE000KDY1003	BMCDTZ8	EUR	0.65%



ETC Group has been created to provide investors with the tools to access the investment opportunities of the digital assets and blockchain ecosystem. United within ETC Group is one of the world's largest electronic market makers and an exceptional team of financial services professionals and entrepreneurs, with experience spanning both the worlds of digital assets and regulated markets. While product quality and safety stand at the core of our product creation approach, we aim at continuously launching best-in-class institutional-grade exchange traded products.

As a company, we have launched the world's first centrally cleared Bitcoin exchange traded product on Deutsche Börse XETRA, the largest ETF trading venue in Europe, and have also launched Europe's first Metaverse ETF together with HANetf. Further information as well as regular digital assets research publications can be found on www.etc-group.com.



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 - ii. the carbon securities ETCs under the terms in the base prospectus approved by the UK Financial Conduct Authority ("FCA") and the relevant final terms of the carbon securities (together, "FCA Carbon ETC Prospectus"); and
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The ETF Prospectus, Metals ETC Prospectus, FCA Carbon ETC Prospectus, CBI Carbon ETC Prospectus and Cryptocurrency Prospectus can all be downloaded from www.hanetf.com.

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