

**Mr. J. Matthew DeLesDernier,
Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549-1090**

RE: Proposed Rule Change to List and Trade Shares of the One River Carbon Neutral Bitcoin Trust (Release No. 34-93840; File Number SR-NYSEArca-2021-67)

Dear Mr. DeLesDernier,

One River Digital Asset Management, LLC (“One River” or “we,” as appropriate) appreciates the opportunity to provide these comments to the Securities and Exchange Commission (the “Commission”) on the above-referenced matters. As the Commission may be aware, we are the sponsor of the One River Carbon Neutral Bitcoin Trust (the “Trust”). We are writing to express our support for the proposal to list and trade shares of the Trust on NYSE Arca, Inc. (“NYSE Arca” or “Exchange,” and such proposal, the “Proposal”), and to respond to the questions posed by the Commission in its December 28, 2021 Federal Register Notice entitled “Self-Regulatory Organizations; NYSE Arca, Inc.; Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to List and Trade Shares of the One River Carbon Neutral Bitcoin Trust under NYSE Arca Rule 8.201-E” (the “Notice”).

Terms used but not defined herein have the meanings ascribed to them in the Notice.

Questions from the Commission Regarding the Proposal

I. On Manipulation (Questions 1 & 4)

The Bitcoin protocol proposes a trustless system for value transfer where the proof-of-work replaces centralized trustees in validating transactions. Proving the work requires the use of computation power to solve a puzzle, where the level of difficulty is calibrated to the time and size of a block of transactions. The energy required in that computation power is the key security feature of the protocol. Bitcoin has matured well beyond a concept. The expansion of its market capitalization to nearly one trillion dollars and average daily turnover of \$18.7 billion is above many well-known single name equity trading volumes such as Apple Inc.

With the rise in value of bitcoin has come a maturation of the infrastructure surrounding its use. Standards have emerged. For instance, CryptoCompare conducts monthly reviews of Exchanges, ranking them based on operational transparency, security, operational quality, regulatory standing, data provision, management team, and the ability to monitor trades and illicit activity effectively. On the latest survey, 91.2% of global cryptoasset trading volume was conducted on top-tier exchanges, and a higher percentage for bitcoin.¹ CoinMetrics, a leader in independent verification of blockchain activity, separates trading volumes by total

¹ https://www.cryptocompare.com/media/38553697/cryptocompare_exchange_review_2021_09.pdf

reported and those identified as “Trusted Exchanges”. Systematic scoring metrics are also becoming commonplace as a way of monitoring issues tied to developer behavior and network activity of importance to potential manipulative activity.²

The deepening of the bitcoin market has also led to novel indices. These indices provide not only a robust price for the spot bitcoin market but also negate the risk of market manipulation. The MVIS CryptoCompare Bitcoin Benchmark Rate (BBR) utilized by the Trust is licensed to asset managers, exchanges, derivatives, and exchange traded products globally with these features in mind. The BBR is calculated as an average of one-hour quantity-weighted median prices across the top five exchanges from the CryptoCompare Review. Prices are recorded for 20 3-minute intervals. This leads to a far more stable bitcoin price (Figure 1). It is also robust against market distortions by design. To manipulate the BBR would require sustained intervention across multiple exchanges during a period of peak market liquidity. Similar methodologies are utilized in the Bitcoin Reference Rate published by Crypto Facilities and utilized as the benchmark to CME futures. Multiple, comparable benchmarks ensure manipulation will be detected.

Carbon offsets used to neutralize the emissions created by bitcoin are benchmarked to the MCO2 token, recently listed on top exchanges.³ The methodology deployed by the Trust is gaining broader adoption.⁴ This is part of a comprehensive trend in the private sector pledging to voluntarily reduce emissions through participation in carbon finance markets. The Trust guards against manipulation in the carbon price measured by MCO2 through two means. First, the Trust does not hold carbon offsets as an asset to benefit from expected price appreciation. Carbon offsets are retired immediately by the Trust upon acquisition at pre-negotiated prices, and thus act as a fund expense. Second, any disruption in MCO2 prices would be circumvented by the Trust using average wholesale price as defined by IHS Markit survey for voluntary carbon credit wholesale prices, a leader in carbon credit registry.⁵

In short, the rising value of bitcoin has accompanied advancement in information around its operational quality and the development of novel techniques designed to increase transparency and negate the risk of manipulation.

² <https://medium.com/@freetokencryptobounty/fundamental-crypto-asset-score-fcas-889da781fa19>

³ <https://www.prnewswire.com/news-releases/gemini-lists-the-mco2-token-the-worlds-first-green-digital-asset-301379181.html>

⁴ <https://www.prnewswire.com/news-releases/skybridge-buys-carbon-offsets-to-green-bitcoin-holdings-301345725.html>

⁵ https://news.ihsmarkit.com/prviewer/release_only/slug/financial-markets-ihs-markit-wins-best-carbon-credit-registry-award-eighth-straight-ye

Figure 1: Bitcoin spot price (white) versus BBR (red)



Source: Bloomberg.

II. On Investor Interests (Questions 2 & 3)

The innovation in the Bitcoin protocol is indicative of broader utilization and institutional adoption. The Bitcoin protocol is dynamic; it encourages innovation within and around the protocol, according to an exceptional standard of progress determined by the consensus of the community. As a simple illustration, the first version had roughly 15,000 lines of code and today the protocol incorporates more than 100,000 lines. This innovation is often subtle, demonstrating its value only with network adoption.

Growth in the Lightning network is a useful illustration. The Bitcoin Lightning network was proposed in 2015 to allow for bitcoin payments to be scaled.⁶ The first transaction did not occur until 2017, though adoption was limited as is common with new technologies. Equally common with new technologies, the value became clear with time. The Lightning network can process millions to billions of transactions across the network, settling off the blockchain, at exceptionally low fees. No legacy payment system can compete.

Last year marked rapid growth in the Lightning network. Measured in bitcoin, the network capacity grew by five-times to roughly \$150 million in 2021, remarkable growth even after controlling for the price of bitcoin (Figure 2). Mainstream payment providers began adoption.⁷ Twitter enabled “tips” to be sent between users across the Lightning network.⁸ Furthermore, in 2022, a Bitcoin-based global payments company, Bottlepay, became the first global payments firm powered by the Lightning network to win the approval of the United Kingdom’s Financial

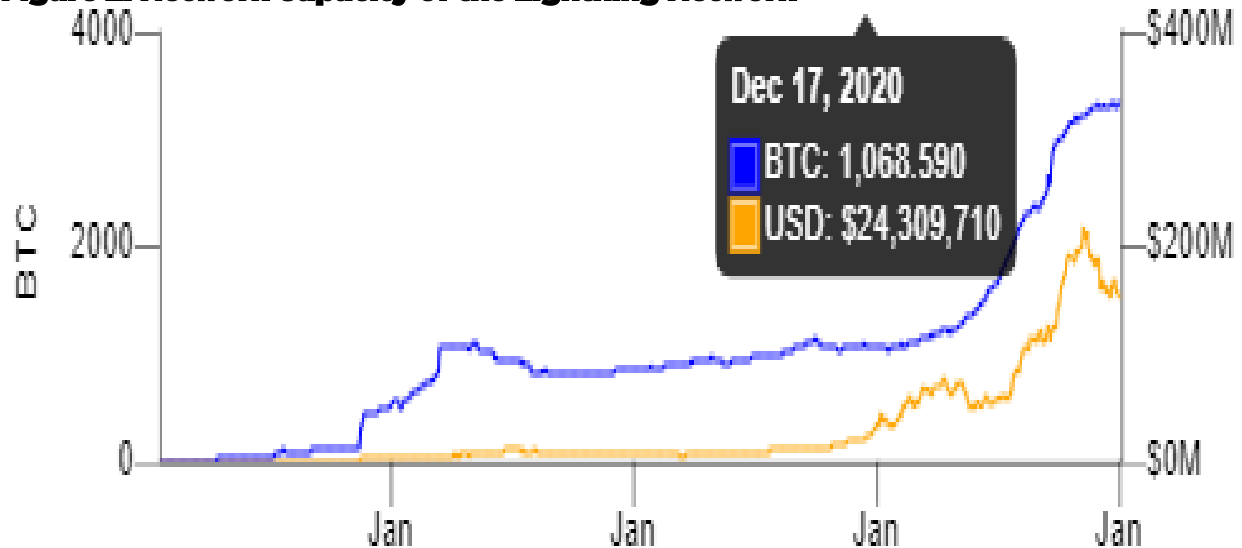
⁶ <https://web.archive.org/web/20150301065655/http://lightning.network/lightning-network-paper-DRAFT-0.5.pdf>

⁷ <https://www.protocol.com/fintech/jack-dorsey-bitcoin-crypto-twitter>

⁸ <https://help.twitter.com/en/using-twitter/tips>

Conduct Authority to register as a cryptoasset business.⁹ This is well beyond a narrow payments exercise. It is a profound step toward changing how individuals are incentivized to provide valuable content.

Figure 2: Network Capacity of the Lightning Network



Source: Bitcoinvisuals.com

Legacy payment operators, recognizing the innovation and the potential loss of market share, are rapidly adapting. Visa, in seeking to unlock opportunities in cryptoassets, states that “crypto is reaching extraordinary levels of adoption and investment—opening a world of possibilities for businesses, governments and consumers.”¹⁰ Visa is working with more than 50 digital wallet providers focused on digital currency settlement on card networks. Their partners include Coinbase and Circle, leaders in the adoption of cryptoassets under U.S. regulatory provision.

The growth of digitalized U.S. dollars (stablecoin) in general, and Circle’s USD Coin (USDC), demonstrates that the technological advancements in bitcoin are symbiotic with fiat currencies. Circle, with the creation of USDC, became a leader in regulated, fully reserved stablecoin. Demonstrating the demand for a regulated digital U.S. dollar, USDC in Circle has grown to \$42 billion from less than \$5 billion a year ago. The digital currency has supported more than \$1.5 trillion in transactions on the blockchain, and many multiples off chain, reinforcing the operational efficiencies to be gained from final and virtually instantaneous settlement.¹¹ In fact, digital U.S. dollars are the collateral benchmark in the digital financial ecosystem, and the private sector is leading the innovation.¹² The corruption-resistant nature of the technology has spurred faster growth in disaster relief using the same blockchain principles introduced in the Bitcoin protocol.

⁹ <https://www.coindesk.com/policy/2022/01/11/nydig-owned-payments-startup-bottlepay-obtains-fca-registration/>

¹⁰ <https://usa.visa.com/solutions/crypto.html>

¹¹ <https://www.circle.com/en/usdc>

¹² https://www.wsj.com/articles/america-future-depends-on-blockchain-crypto-bitcoin-payments-transfers-federal-reserve-11639668586?mod=article_inline

The rising acceptance of the value of innovations tied to digital assets has led to enhanced engagement between operators and regulators. U.S. policy is aiming to bring cryptoassets into the regulatory mainstream, as individual investors gain exposure to the digitalization of global finance. The President's Working Group articulated a pathway for private stablecoin to integrate into the U.S. banking system that was supported by the operators in the space, mostly recently before the House Services Committee on December 8, 2021.¹³ The growth and breadth of demand is leading to broader service provision from traditional financial intermediaries. Bank of New York Mellon, America's oldest bank, formed a consortium with six banks to focus on digital asset service solutions that fit the regulatory landscape for institutions.¹⁴

As the cryptoassets move into the regulatory mainstream, the lines between digital and traditional assets will become increasingly blurred. Bitcoin is the first mover in these trends, the proof of concept. Bitcoin demonstrated the capacity of blockchain technologies and spearheaded an unlocking of broader benefits across all sectors and asset classes. Accelerated institutional interest in these technologies is undeniable, and vastly different from the early stages of bitcoin's existence. Embracing these innovations will prevent an offshoring of their capacities, as seen with rapid growth in international exchange traded products and digital currency advancement outside of the United States.

In turn, we believe the product provides protections to investors and the public interest that is consistent with Section 6(b)(5) of the Act. Investor protections are paramount. Surveillance sharing on trading activity, clearing activity, and customer identity are important attributes. At the core of these interests is the ability to identify person(s) attempting to manipulate the exchange traded product.

The Index construction makes the risk of market manipulation remote. It would take hours of sustained intervention across multiple exchanges. The economic incentives skew powerfully against the outcome. The commitment of Constituent Exchanges to implement surveillance infrastructure that detects and prevents fraud is aimed at investor protection.

Further, the Exchange adheres to robust surveillance procedures to monitor the trading of the Shares as well as deter and detect violations of applicable federal securities laws. The Exchange and FINRA stand prepared to communicate on the trading in the Shares with other markets that are members of the ISG, whose purpose is to coordinate with regulatory efforts. Information on the trading in the Shares may be readily obtained.

Time is an important factor. Time has allowed bitcoin to be recognized for its technological leadership that can greatly benefit financial economic outcomes. Time is encouraging innovators to consult regulatory bodies on the future of innovation. Physical bitcoin is one representation of those technological changes.

¹³ <https://financialservices.house.gov/uploadedfiles/hhrg-117-ba00-wstate-allairej-20211208.pdf>

¹⁴ <https://www.ft.com/content/e02f954e-e30f-4d7e-a88e-801474dcfe27>

Today, investors seeking the protections and familiarity of exchange traded products are limited to closed-end funds, whose value has eroded greatly relative to the underlying physical assets, or financial derivatives. Financial derivatives of bitcoin are a synthetic representation of the physical asset. Unlike other commodity markets, the algorithmic supply of bitcoin means that the miners of bitcoin are not likely sufficient to satisfy demand through financial products. Thus, the forward cost of bitcoin rises to the point where speculative traders are willing to sell bitcoin and satisfy synthetic investor demand. In the past year, the annualized one-month cost to investors in bitcoin futures is 7.1%. At those rates, the investor value holding bitcoin futures would be halved in less than 10 years.

Financial derivatives are speculative trading vehicles; physical bitcoin is a long-term investment holding. Investors are afforded Exchange protections. Most of the investor demand for bitcoin is captured by physical assets. An exchange traded product would minimize the cost to investors with market forces bringing the product value in line with net asset values of holdings. The rising trend towards voluntary carbon allowances gives investors the added value of measuring, monitoring, and neutralizing the emissions of the bitcoin network in a transparent manner.

III. On In-Kind Transactions (Question 5)

A physical bitcoin exchange traded product seeks to bring the net asset value of the underlying holdings as close to the traded value of the product as possible. The creation/redemption process is obviously at the core of that outcome. The focus on in-kind transactions aims to attract authorized participants with the most experience trading in the physical bitcoin market. Further, with time and success legacy financial intermediaries will also improve their technology stack to engage in digital assets.

A longer-term consideration consequential to investors may also emerge with a focus on in-kind transactions. An investor in an exchange traded product backed by physical bitcoin may have the potential in the future to redeem shares in bitcoin rather than U.S. dollars. Currently, investors are focused on gaining exposure to technology trends. However, over time as volatility subsides, the investment value of assets such as bitcoin could focus on its store-of-value. Then, bitcoin may be viewed as a unique type of collateral, utilized to fund other investments in the digital ecosystem.

Just as an in-kind exchange for redemption and creation of Shares is more efficient than cash, establishing this precedent may also lead to the natural extension of investors seeking in-kind delivery as they consume custodial and other financial services directly. In this case, exchange traded products would be a transition to a more digitalized, personalized, and efficient form of automated financial services.

IV. On Transparency (Question 6)

The Trust has separated the calculation and publication of the benchmark carbon-neutral bitcoin index from asset management responsibilities. In doing so, the Trust

had its framework evaluated by third-party calculation agents while creating an Index to the highest of regulatory standards through MVIS. Transparency is the hallmark of MVIS indices. Rules-based methodology is published and replicated by calculation agents to ensure accuracy.

Energy consumption and carbon emissions are critical components of the Bitcoin network. Energy utilization is the key security feature of the protocol as it is exceptionally costly to disrupt the network as its utilization and value grow. The high degree of energy consumption does not translate to carbon emissions; the source of energy used for bitcoin mining is the key issue. It is estimated that 40% of bitcoin's energy consumption is tied to renewables, even higher in North America where mining has moved. The Crypto Climate Accord targets net zero emissions for the cryptoasset industry by 2040.¹⁵ The broader challenges with the trend toward electrification is not unique to bitcoin. Electric vehicles also require careful contemplation of the sources of energy and the mining requires to produce the inputs to the vehicles.

The published Index and methodology ensure the time consistency of calculations. Today, the cost of neutralizing carbon emissions is relatively minor. The rise in voluntary demand for carbon offsets combined with supply limitations can make that cost more substantial. Investors may deem the cost of carbon offset too high. However, a rising cost of achieving carbon neutrality will also increase the incentives to innovate in energy usage, then reducing the emissions from the bitcoin network.

Bitcoin miners are unique in their energy consumption in that they can move to cheaper or greener sources of energy. By shining a bright light on the issue through a published Index, the Bitcoin network will be required to address carbon emissions.

V. On Carbon Offset Calculations (Question 7)

The Trust's investment objective is to seek to track the performance of bitcoin, as measured by the Index. This is adjusted for the Trust's expenses and other liabilities, including the expenses associated with the offsetting carbon credits.

The Index provides a transparent benchmark to the investment objective. Importantly, the MCO2 tokens are not assets to the fund. It is an expense incurred by the Trust to offset the carbon emissions from its bitcoin holdings.

Fund expenses amortize daily, thus apportioning expenses fairly to investors over their holding periods. The estimated carbon emissions per bitcoin, provided by the Index calculation agents, are applied to the average daily bitcoin holdings of the Trust. The daily market value of that carbon offset expense is benchmarked to the value of the MCO2 price per offset.

¹⁵ <https://www.nasdaq.com/articles/bitcoins-green-potential%3A-energy-consumption-does-not-equal-carbon-emissions>

The expense of the carbon offset is crystalized at the end of the quarter. The Trust purchases carbon offsets based on the average daily holdings of bitcoin over the period and the cost of the carbon offset. The offsets are immediately retired, and thus taken out of circulation. As the realized expense is based on a pre-negotiated price through 2023, the realized fund expenses could be slightly higher or lower than the accrued expense from the daily market price of the MCO2 token.

After the period of agreement with Moss Earth in 2023, the Trust may pursue alternative carbon offsets. It is committed to transparency on those offsets. Further, if for any reason the MCO2 offsets were unavailable, an extraordinary event would lead to a change in the pricing source for the Index calculation and the Trust would transact to the benchmark IHS Markit survey for voluntary carbon offsets, plus a spread to capture the cost of tokenizing the offsets without risk of deviating from its investment objective.

Conclusion

We thank the Commission for considering this letter of support for the Trust and the Proposal. We stand ready to provide additional comments or to answer any questions you may have.

Very truly yours,

One River Digital Asset Management, LLC