



Electronically Filed

August 8, 2023

Vanessa Countryman  
Secretary  
U.S. Securities and Exchange Commission  
100 F Street, NE  
Washington, DC 20549-1090

Re: Ark 21Shares Bitcoin ETF, File No. SR-CboeBZX-2023-028  
Invesco Galaxy Bitcoin ETF, File No. SR-CboeBZX-2023-038  
iShares Bitcoin Trust, File No. SR-NASDAQ-2023-016  
Valkyrie Bitcoin Fund, File No. SR-NASDAQ-2023-019  
VanEck Bitcoin Trust, File No. SR-CboeBZX-2023-040  
WisdomTree Bitcoin Trust, File No. SR-CboeBZX-2023-042  
Wise Origin Bitcoin Trust, File No. SR-CboeBZX-2023-044

Dear Ms. Countryman:

Better Markets<sup>1</sup> appreciates the opportunity to comment on several proposed rule changes filed by the Cboe BZX Exchange, Inc. and The Nasdaq Stock Market LLC (collectively referred to as the “Exchanges”) with the Securities and Exchange Commission (“SEC” or “Commission”), seeking to list and trade shares of spot bitcoin-based exchange-traded products (“ETPs”).<sup>2</sup>

The Exchanges propose to change their rules to list and trade shares in spot bitcoin-based ETPs—a financial product designed to make it simpler for a wider swath of investors to invest in bitcoin rather than acquiring, holding, and trading bitcoin directly on an unregulated digital asset

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<sup>1</sup> Better Markets is a non-profit, non-partisan, and independent organization founded in the wake of the 2008 financial crisis to promote the public interest in the financial markets, support the financial reform of Wall Street, and make our financial system work for all Americans again. Better Markets works with allies—including many in finance—to promote pro-market, pro-business, and pro-growth policies that help build a stronger, safer financial system that protects and promotes Americans’ jobs, savings, retirements, and more.

<sup>2</sup> Ark 21Shares Bitcoin ETF, File No. SR-CboeBZX-2023-028; Invesco Galaxy Bitcoin ETF, File No. SR-CboeBZX-2023-038; iShares Bitcoin Trust, File No. SR-NASDAQ-2023-016; Valkyrie Bitcoin Fund, File No. SR-NASDAQ-2023-019; VanEck Bitcoin Trust, File No. SR-CboeBZX-2023-040; WisdomTree Bitcoin Trust, File No. SR-CboeBZX-2023-042; Wise Origin Bitcoin Trust, File No. SR-CboeBZX-2023-044.

exchange. These spot bitcoin-based ETPs are intended to reflect the performance of bitcoin by holding a combination of bitcoin and cash with separate custodians for each asset.

The Exchanges advance two major arguments in their effort to comply with the requirements of Section 6(b)(5) of the Securities Exchange Act of 1934 (“Exchange Act”), which governs national securities exchanges. Section 6(b)(5) requires that all exchange rules must be designed to “prevent fraudulent and manipulative acts and practices” and “to protect investors and the public interest.” In their bid to satisfy these requirements, the Exchanges argue that the CME bitcoin futures market is a regulated market of significant size and can therefore serve as a meaningful source of data and insight regarding potential fraud and manipulation in the proposed spot bitcoin-based ETP market—this despite the Commission’s well-documented previous orders expressly finding that the CME bitcoin futures market is *not* a regulated market of significant size. The Exchanges further propose to take additional steps to detect, investigate, and deter fraud and market manipulation in spot bitcoin-based markets by also entering into a surveillance-sharing agreement with Coinbase, Inc. Under that agreement, the Exchanges expect to receive access to trading data in spot bitcoin trades on Coinbase.

The Commission should issue an order disapproving the rule changes proposed by the Exchanges. As discussed in more detail below, the spot bitcoin markets (1) have a history of artificially inflated trading volumes due to rampant manipulation and wash trading; (2) are highly concentrated; and (3) rely on a select group of individuals and entities to maintain bitcoin’s network. These are features of the bitcoin network that make a proposed spot bitcoin-based ETP extremely vulnerable to manipulation by bad actors, posing unnecessary risks to investors and the public interest. The Exchanges’ proposed rule changes cannot neutralize this threat because the CME bitcoin futures market is not a regulated market of significant size and the surveillance-sharing agreements with Coinbase add little or no value in detecting and deterring manipulation of any proposed spot bitcoin-based ETP. The concentrated nature of the spot bitcoin market and the heavy reliance on a select group of individuals and entities to maintain its network threatens a myriad of other harms, such as hacking, defalcation, and even system failures that could hurt countless investors and undermine the public interest.

For all of these reasons, the Commission should, consistent with its previous orders disapproving multiple spot bitcoin-based ETPs from multiple exchanges, issue an order disapproving the proposed rules changes from the Exchanges.

**1. The Framework for Evaluating the Proposed Listing of Spot Bitcoin-based ETPs Under the Exchange Act Clearly Requires Exchanges to Prevent Manipulation and Fraud as Well as Other Threats to Investors and the Public Interest**

The Exchange Act governs proposed rule changes by national securities exchanges such as those contemplated in the above-referenced filings by the Exchanges to list and trade spot bitcoin-based ETPs. Pursuant to Section 19(b)(1) of the Exchange Act and Rule 19b-4 thereunder, each self-regulatory organization, including national securities exchanges, must file with the Commission any proposed change in its rules for approval or disapproval by the Commission, with

an opportunity for the public to comment on such proposed rule change.<sup>3</sup> The Commission must approve, disapprove, or institute proceedings to determine whether to disapprove of the proposed rule change by order within 45 days after the publication of the proposed rule change in the Federal Register, except the Commission may extend the review period by an additional 45 days if it determines that a longer period of time is appropriate.<sup>4</sup>

For the Commission to grant approval of any proposed rule change by a national securities exchange, the proposed rule change must be consistent with the requirements of Section 6(b)(5), specifically the requirement that a national securities exchange's rules be designed to "prevent fraudulent and manipulative acts and practices" and "to protect investors and the public interest."<sup>5</sup> The Commission has stated on numerous occasions that, with respect to the problem of manipulation, an exchange seeking to list spot bitcoin-based ETPs "can meet its obligations under the Exchange Act Section 6(b)(5) by demonstrating that the exchange has a comprehensive surveillance-sharing agreement with a regulated market of significant size related to the underlying or reference bitcoin assets."<sup>6</sup> The Commission has stated that the terms "significant market" and "market of significant size" include markets where:

- (a) there is a reasonable likelihood that a person attempting to manipulate the ETP would also have to trade on that market to successfully manipulate the ETP, so that a surveillance-sharing agreement would assist in detecting and deterring misconduct; and
- (b) it is unlikely that trading the ETP would be the predominant influence on prices in that market.<sup>7</sup>

The Commission believes that a surveillance-sharing agreement with a "significant market" provides "a necessary deterrent to manipulation because they facilitate the availability of information needed to fully investigate a manipulation if it were to occur."<sup>8</sup>

Finally, the Exchange Act makes clear that exchange rules must be designed not only to prevent fraud and manipulation but also more broadly "to protect investors and the public interest." As demonstrated below, the Exchanges' proposed rule changes fail on at least both counts.

## 2. The Proposed Rule Changes Suffer From Major Gaps

The proposed rule changes by the Exchanges each include an overview of bitcoin, including information related to its history, its network operations, the transfers and transactions

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<sup>3</sup> 15 U.S.C. 78s(b)(1).

<sup>4</sup> 15 U.S.C. 78s(b)(2).

<sup>5</sup> 15 U.S.C. 78f(b)(5); *see also* Self-Regulatory Organizations; NYSES Arca, Inc.; Order Disapproving a Proposed Rule Change, as Modified by Amendment No. 1, to List and Trade Shares of Grayscale Bitcoin Trust under NYSE Arca Rule 8.201-E (Commodity-Based Trust Shares), 87 Fed. Reg. 40,299, 40,300 (July 6, 2022).

<sup>6</sup> 87 Fed. Reg. at 40,300.

<sup>7</sup> *Id.*

<sup>8</sup> *Id.* at 40,301.

on the network, the creation of new bitcoin, limits on supply, and other background information. However, the proposed rule changes noticeably fail to discuss three critically important features of the bitcoin network: (1) a history of artificially inflated spot trading volume due to manipulation and wash trading (2) highly concentrated ownership; and (3) reliance on the efforts of a handful of select individuals to maintain the network.

Conveniently, these features are missing from the discussion of the bitcoin network in the proposed rule changes submitted by the Exchanges. Yet it is these characteristics that make it impossible for any proposed rule change to list and trade shares of spot bitcoin-based ETPs in accordance with provisions of the Exchange Act. Specifically, these features are inconsistent with the requirements in Section 6(b)(5) that national securities exchange rules be designed to “prevent fraudulent and manipulative acts and practices” and “to protect investors and the public interest.”

### **3. Spot Bitcoin Trading is Susceptible to Manipulation That Cannot be Cured by Any Surveillance Sharing Agreement**

#### **A. The Bitcoin Market Has a History of Artificially Inflated Spot Trading Volume Due to Manipulation and Wash Trading**

Long used by unscrupulous traders, wash trading is a form of market manipulation where a trader and/or its affiliates create the appearance of high trading interest and trading volume by placing buy and sell orders in the market without actually in effect taking a position. In securities law, wash trading is strictly prohibited and enforced as securities fraud. However, in the crypto markets it has quickly become a frequent mainstream practice. An in-depth analysis of 29 major crypto exchanges found that, on average, as much as 77.5 percent of the total trading volume on unregulated exchanges was due to wash trading, citing wash trading as an “industry-wide phenomenon.”<sup>9</sup> As for wash trading in bitcoin specifically, experts have suggested that a majority of the trading volume in bitcoin and as much as 95% could be due to wash trading.<sup>10</sup> Without account-ID information and verification by crypto exchanges, among other things, manipulative wash trading remains a core predatory feature of the crypto markets, preventing accurate price discovery in crypto markets and victimizing retail investors who are lured into the crypto markets through the phony volume and inflated pricing that wash trading creates.

Additionally, a recent SEC complaint alleges that affiliates of Binance.US engaged in widespread wash trading on the platform to artificially inflate the trading volume of select cryptocurrencies. The complaint notes that Binance.US senior officials acknowledged not only

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<sup>9</sup> Lin William Cong, Xi Li, Ke Tang, Yang Yang, “Crypto Wash Trading,” NAT’L BUREAU OF ECON. RSCH. 4 (December 2022), <https://www.nber.org/papers/w30783>. Notably, the study makes a distinction between “regulated” and “unregulated” exchanges. The study includes Bitstamp, Coinbase, and Gemini as regulated exchanges and, generally, finds little evidence of wash trading on those exchanges.

<sup>10</sup> See, e.g., Bitwise Asset Management, Presentation to the SEC (Mar. 19, 2019), <https://www.srn.com/document/2019015164833-183434.pdf> (sec.gov); see also Javier Paz, More than Half of All Bitcoin Trades Are Fake, FORBES (Aug. 26, 2022), <https://www.forbes.com/sites/javierpaz/2022/08/26/more-than-half-of-all-bitcoin-trades-are-fake/?sh=1a9340576681>. “A new Forbes analysis of 157 crypto exchanges finds that 51% of the daily bitcoin trading volume being reported is likely bogus.”

that wash trading was possible on their platform but also that they did not have any systems in place to monitor such trading.<sup>11</sup> The complaint alleges that in its first hour of operations, 99 percent of the trading on Binance.US in at least one cryptocurrency was due to wash trading and that after the first day wash trading accounted for nearly 70 percent of the trading in at least one cryptocurrency.<sup>12</sup> Recent news reports suggest that the cryptocurrency that was being wash traded was bitcoin.<sup>13</sup>

#### B. The CME Bitcoin Futures Market Is Not a Regulated Market of Significant Size

In their proposed rule changes, the Exchanges make the argument that the CME bitcoin futures market is a regulated market of significant size that is sufficient to assist in detecting and deterring manipulation in spot bitcoin-based ETPs. However, this argument has already been rejected by the Commission in previous proposed rule changes by other national securities exchanges. Furthermore, it is fundamentally flawed because there is insufficient evidence that someone attempting to manipulate a spot bitcoin-based ETP would have to trade on the CME bitcoin futures markets due to the overwhelming majority of bitcoin trading occurring on unregulated exchanges outside the U.S. that have also proven to be ripe for manipulation and wash trading. For these reasons, the Commission must find that the CME bitcoin futures market is not a regulated market of significant size that would enable the detection of manipulation in the market for a spot bitcoin-based ETP, consistent with its past findings.

The Commission has repeatedly stated in past orders disapproving proposed rule changes by exchanges seeking to list and trade spot bitcoin-based ETPs that any proposed rule change must meet its obligation under the Exchange Act, specifically Section 6(b)(5).<sup>14</sup> Additionally, the Commission has stated in past orders that an exchange may meet its obligations under Section 6(b)(5) of the Exchange Act by entering into “a comprehensive surveillance-sharing agreement with a regulated market of significant size related to the underlying or reference bitcoin assets.”<sup>15</sup> The Commission has also defined the terms “significant market” and “market of significant size” to include a market that (a) there is a reasonable likelihood that a person attempting to manipulate the ETP would also have to trade on that market to successfully manipulate the ETP, so that a surveillance-sharing agreement would assist in detecting and deterring misconduct, and (b) it is unlikely that trading in the ETP would be the predominant influence on prices in that market.<sup>16</sup>

The Exchanges seeking proposed rule changes to list and trade shares in spot bitcoin-based ETPs make the argument that the CME bitcoin futures market is a regulated market of significant size sufficient to detect and deter manipulation of any spot bitcoin-based ETP. While both the Exchanges and the CME are joint members of Intermarket Surveillance Group (“ISG”) and the

<sup>11</sup> Complaint at 64, SEC v. Binance Holdings Ltd., 1:23-cv-01599 (U.S.D.C. 2023).

<sup>12</sup> Complaint at 66, SEC v. Binance Holdings Ltd., 1:23-cv-01599 (U.S.D.C. 2023).

<sup>13</sup> Patricia Kowsmann, *Some Binance.US Crypto Trading Was a Mirage, the SEC Alleges*, Wall S. J. (July 24, 2023), <https://www.wsj.com/articles/some-binance-us-crypto-trading-was-a-mirage-the-sec-alleges-55a6e321>. The article discusses an internal email sent by Binance CEO, Changpeng Zhao, regarding the almost \$70,000 of bitcoin changing hands within the first hour of Binance.US commencing operations when he said, “That was ourself, I think.”

<sup>14</sup> 87 Fed. Reg. at 40,300.

<sup>15</sup> 87 Fed. Reg. at 40,300.

<sup>16</sup> 87 Fed. Reg. at 40,300.

Commission has generally accepted joint membership in ISG as creating a surveillance-sharing agreement, the CME bitcoin futures market is not a regulated market of significant size sufficient to detect and deter manipulation in spot bitcoin-based ETPs. In previous orders disapproving an exchange's proposed rule change to list and trade shares in a spot bitcoin-based ETP, the Commission determined that the CME bitcoin futures market does not meet either of the two prongs of the test the Commission has used to determine a regulated market of significant size.<sup>17</sup> Specifically, the Commission determined that the exchanges' proposed rule change lacked evidence that an interrelationship existed between the CME bitcoin futures market and the spot bitcoin market to the extent a would-be manipulator would have to trade on the derivatives market to manipulate the spot bitcoin-based ETP. Further the Commission concluded there was not enough evidence to determine that it is unlikely that trading in the proposed ETP would be the predominant influence on prices in the CME bitcoin futures market.

Similar to past Commission orders disapproving the listing and trading of spot bitcoin-based ETPs, the Exchanges' proposed rule changes at issue lack the evidence necessary to find that the CME bitcoin futures market is a regulated market of significant size to detect and deter manipulation in a spot bitcoin-based ETP. As discussed below, the spot bitcoin market is deeply concentrated among a few large holders and fraught with manipulative wash trading outside the U.S., which interferes with true price discovery.<sup>18</sup> In this environment, a would-be manipulator would not have to trade on the CME bitcoin futures market to manipulate a spot bitcoin-based ETP. In fact, with more than 90 percent of all spot bitcoin trading volume occurring on unregulated exchanges outside the U.S., there are ample opportunities to manipulate the price of spot bitcoin—and through it spot bitcoin-based ETPs—outside the CME bitcoin futures market.

C. The Surveillance Agreement with Coinbase Adds Only the Veneer of Value in Preventing Fraudulent and Manipulative Acts or Practices

The Exchanges seek to supplement their surveillance-sharing agreements with the CME bitcoin futures market in their proposed rule changes (thus tacitly admitting that reliance on the CME bitcoin futures market alone would not be sufficient to detect and deter manipulation of a spot bitcoin-based ETP) with a surveillance-sharing agreement with Coinbase, Inc. While the Exchanges are correct that a majority of spot bitcoin trading in the U.S. occurs on the Coinbase platform, only a small portion of overall, global spot bitcoin trading occurs on the platform (perhaps as little as 5 percent).<sup>19</sup> Hence, relying on an exchange that represents such a small fraction of the overall trading of bitcoin for market surveillance of a commodity that has a reputation for being heavily manipulated via wash trading would add very little, if any, value to detecting or deterring manipulation of a spot bitcoin-based ETP.

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<sup>17</sup> 87 Fed. Reg. at 40,312–40,313.

<sup>18</sup> See also John M. Griffin and Amin Shams, *Is Bitcoin Really Untethered*, THE J. OF FIN. (August 2020), <https://onlinelibrary.wiley.com/doi/epdf/10.1111/jofi.12903>.

<sup>19</sup> James Cirrone, *Less than 10% of all bitcoin trading volume happens in the US: CCdata*, BLOCKWORKS (July 5, 2023), <https://blockworks.co/news/bitcoin-trading-volume-us>. According to CCData, only 9.49 percent of spot bitcoin trading occurs on U.S.-based crypto exchanges. Of this 9.49 percent of spot bitcoin trading on U.S.-based exchanges, Coinbase represents 61 percent of the spot bitcoin trading volume on U.S. exchanges.

There are further compelling reasons for discounting the value of any surveillance agreement with Coinbase. Coinbase is not registered with the CFTC or the SEC. In addition, it is the subject of an ongoing enforcement action by the SEC for operating an unregistered exchange. It would be wholly inappropriate for any national securities exchange to enter into a surveillance-sharing agreement with an entity performing exchange-like functions that is not registered with the SEC or CFTC and that appears to have flouted the registration requirements under the securities laws.

In addition to allegedly operating an unregistered securities exchange, Coinbase recently launched their new Base chain platform that seeks to bring “Coinbase’s products, users, and assets into the decentralized cryptoeconomy.”<sup>20</sup> Just one month since launching, this platform has already proven its worth to scammers, fraudsters, and manipulators as a way to defraud investors and traders out of millions of dollars. Last week, a cryptocurrency developer used the Base platform to launch a meme coin called BALD. Within a day after its launch the token rose in price by 3,000 percent reaching nearly \$85 million in market cap only to see the original developer pull \$25.6 million of liquidity out of the token.<sup>21</sup> Predictably, the price of the token crashed—a classic case of manipulation and fraud known in the cryptocurrency industry as a “rug pull.”



It would be an indefensible mistake for the Commission to attach any value to the Exchanges’ proposed surveillance-sharing agreement with an alleged unregistered securities exchange, especially one whose products not only fail to detect or deter manipulation but also actually enable fraudsters and manipulators to defraud traders and investors.

<sup>20</sup> Introducing Base: Coinbase’s L2 Network, COINBASE, <https://help.coinbase.com/en/coinbase/other-topics/other/base>.

<sup>21</sup> Matt Di Salvo, *BALS Meme Coin on Coinbase Layer-2 Goes to Zero as Dev Pulls Liquidity*, DECRYPT (July 31, 2023), <https://decrypt.co/150693/following-meme-coin-mania-on-coinbases-base-one-token-appears-to-be-a-rug>.

#### **4. The High Degree of Concentration in the Ownership and Operation of the Bitcoin Market Poses Yet Further Risks to Investors and the Public Interest, Providing Additional Grounds for Denying the Exchanges' Proposed Rule Changes**

##### **A. The Bitcoin Market Has Highly Concentrated Ownership**

One of the hallmarks of the creation of bitcoin, the first cryptocurrency and largest in terms of market cap, was that it could enable peer-to-peer transfers of electronic cash without the need for financial intermediaries.<sup>22</sup> The ability to conduct financial transactions without the need for a centralized, traditional financial intermediary to facilitate the transaction has led many, including the Exchanges in their proposed rule changes, to describe bitcoin as a “decentralized network.” Despite the claims of decentralization in bitcoin and cryptocurrencies more generally, a cursory review of the concentration of tokens and governance power in the bitcoin markets match or surpass the concentration of money and power in traditional financial markets. In an industry where the number of tokens often equate with the ability to govern the cryptocurrency network, tokens equal power.

In particular, the mining power and concentration of bitcoin in the hands of a select few miners and individual wallets pose real risk to the network and, in turn, to potential investors in a spot bitcoin-based ETP. A study from 2021 found that the top 10 percent of bitcoin miners control 90 percent of mining capacity and about 50 miners (the top 0.1 percent) control nearly 50 percent of bitcoin mining capacity.<sup>23</sup> Not only do a small percentage of miners control a vast majority of the mining capacity, but between 60-80 percent of bitcoin miners are located outside the U.S. in China.<sup>24</sup> That same in-depth study found that the top 10,000 bitcoin accounts hold 5 million bitcoins and the top 1,000 bitcoin accounts hold 3 million bitcoins.<sup>25</sup> In other words, the top 1 percent of bitcoin holders own 27% of the 19 million bitcoin in circulation.<sup>26</sup> The study concluded that “the Bitcoin ecosystem is still dominated by large and concentrated players...[t]his inherent concentration makes Bitcoin susceptible to systemic risk and also implies that the majority of the gains from further adoption are likely to fall disproportionately to a small set of participants.”<sup>27</sup> Not only does such concentration in bitcoin pose systemic risk and benefit the few, it also raises significant risks to the investing public if a spot bitcoin-based ETP were able to list and trade on a national securities exchange.

##### **B. The Bitcoin Market Also Relies on the Efforts of Select Individuals to Maintain the Network**

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<sup>22</sup> See generally Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (Oct. 31, 2008).

<sup>23</sup> Igor Makarov and Antoinette Schoar, “Blockchain Analysis of the Bitcoin Market,” NAT’L BUREAU OF ECON. RSCH. 4 (October 2021), [https://www.nber.org/system/files/working\\_papers/w29396/w29396.pdf](https://www.nber.org/system/files/working_papers/w29396/w29396.pdf).

<sup>24</sup> *Id.* at 5.

<sup>25</sup> *Id.* at 29 (The study further notes these numbers are conservative because they “do not assign the ownership of early bitcoins [about 1 million], which are held in about 20,000 addresses, to one person (Satoshi Nakamoto) but consider them as belonging to 20,000 different individuals).

<sup>26</sup> Tor Constantino, *Recent Study Finds Bitcoin Ownership Could Be Too Concentrated*, MOTLEY FOOL (Dec. 28, 2021), <https://www.fool.com/the-ascent/cryptocurrency/articles/recent-study-finds-bitcoin-ownership-could-be-too-concentrated/>.

<sup>27</sup> Makarov and Schoar, *supra* note 10 at 30.



Despite claims that bitcoin is decentralized, the network relies on the efforts of a select group of individuals to maintain the network and a select group of miners who have a majority of the mining capacity to prevent an attack on the network. Because bitcoin has no centralized governance or employees per se, the network relies on a system of incentives and goodwill to effectively maintain and run the code necessary for the network to exist. For example, a select group of individuals known as “maintainers” are critical to the functioning of the \$500 billion cryptocurrency. In an article in the Wall Street Journal from earlier this year, writer Paul Kiernan sheds light on the five maintainers of the Bitcoin Core program that have the ability to make changes to the software code that helps keep the bitcoin network up-to-date.<sup>28</sup> Like any software program, coders must patch and update bitcoin’s source code in order to protect it from cyberattacks and any lag in its usefulness. The article notes how important these five individuals are to the operation of the bitcoin network, and it illustrates the point by explaining that “[a]t least once, the maintainers secretly patched a bug that bitcoin proponents say could have destroyed the cryptocurrency’s value.”<sup>29</sup> This power placed in the hands of such a select few individuals to maintain a \$500 billion network without any government oversight raises risks to investors and the public if any one of those five maintainers were to be corrupted.

Bitcoin is a proof-of-work protocol that requires a majority of honest miners using their computing power to validate transactions that make up the blockchain. Some have argued that to corrupt such a network, a bad actor would have to control a majority of all bitcoin mining capacity – known as a 51 percent attack. In reality, however, the potential corruption of a select group of maintainers charged with maintaining and updating bitcoin source code cuts against the argument that it would take 51 percent of the computing power of the bitcoin network to corrupt the network. Additionally, a recent report conducted by Trail of Bits at the behest of the Defense Advanced Research Projects Agency (“DARPA”) also highlights the vulnerabilities of the bitcoin network due to the concentration of bitcoin mining pools (a group of large bitcoin miners who combine their computational power). In this report, the authors find that it is not necessary to affect a 51 percent attack on the bitcoin network by controlling 51 percent of the nodes on the network, but instead, such an attack could occur by controlling only the four most popular mining pool nodes.<sup>30</sup> This is possible because the four largest mining pools have a majority of the computational power to conduct a 51 percent attack. Here, again, the reliance on the efforts of such a few individuals or entities, in this case mining pools, to maintain the bitcoin network raises risks to investors if they were ever to be corrupted. These are risks that would flow through to investors if the Exchanges were permitted to list spot bitcoin-based ETPs.

In light of these embedded characteristics of the bitcoin market, including the concentration in ownership and operation, the Exchanges’ proposed rule changes pose additional risks to investors beyond the core threat of widespread manipulation. Accordingly, those proposed rule

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<sup>28</sup> Paul Kiernan, *Bitcoin’s Future Depends on Handful of Mysterious Coders*, WALL S. J. (Feb. 16, 2023), <https://www.wsj.com/articles/bitcoin-core-maintainers-crypto-7b93804#:~:text=Their%20role%20is%20critical%20to,that%20make%20up%20its%20network>.

<sup>29</sup> *Id.*

<sup>30</sup> Evan Sultanik et al., *Are Blockchains Decentralized? Unintended Centralities in Distributed Ledgers*, TRAIL OF BITS 7 (June 2022), [https://blog.trailofbits.com/wp-content/uploads/2022/06/Unintended\\_Centralities\\_in\\_Distributed\\_Ledgers.pdf](https://blog.trailofbits.com/wp-content/uploads/2022/06/Unintended_Centralities_in_Distributed_Ledgers.pdf).

changes fail to meet the requirements of the Exchange Act, as they are not designed to protect investors or the public interest, and the Commission should reject them.

**CONCLUSION**

We hope these comments are helpful as the Commission considers the Exchanges' proposed rule changes.

Sincerely,



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