January 19, 2022

Secretary
Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549-1090

Re: File No. SR-CboeBZX-2021-039, Amendment No. 1

Dear Secretary:

On December 23, 2021, Cboe BZX Exchange, Inc. (the "Exchange") filed with the Securities and Exchange Commission (the "Commission") Amendment No. 1 to SR-CboeBZX-2021-039 in order to clarify certain points and add additional details. This Amendment No. 1 to SR-CboeBZX-2021-039 amends and replaces in its entirety the proposal as originally submitted on May 10, 2021. The Exchange submitted proposal SR-CboeBZX-2021-039 in order to list and trade shares of the Wise Origin Bitcoin Trust (the "Trust"), under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares. In order to provide notice for public review of this Amendment No. 1, in addition to posting on the Exchange's public website, the Exchange is filing this comment letter with the Commission.

Sincerely,

Kyle Murray
Vice President, Associate General Counsel

Required fields are shown with yellow backgrounds and asterisks.

Page 1 of * 137

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 19b-4

File No. * SR 2021 - * 039
Amendment No. (req. for Amendments *) 1

Filing by Cboe BZX Exchange, Inc.

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Initial *	Amendment *	Withdrawal	Section 19(b)(2) *	Section 19(b)(3)(A) *	Section 19(b)(3)(B) *
☐	☑	☐	☑	☐	☐

Pilot	Extension of Time Period for Commission Action *	Date Expires *
☐	☐	

Rule

☐ 19b-4(f)(1) ☐ 19b-4(f)(4)
☐ 19b-4(f)(2) ☐ 19b-4(f)(5)
☐ 19b-4(f)(3) ☐ 19b-4(f)(6)

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010

Section 806(e)(1) *	Section 806(e)(2) *
☐	☐

Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 3C(b)(2) * ☐

Exhibit 2 Sent As Paper Document ☐

Exhibit 3 Sent As Paper Document ☐

Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Contact Information

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name *	Kyle	Last Name *	Murray
Title *	VP, Associate General Counsel		
E-mail *	[redacted]		
Telephone *	[redacted]	Fax	

Signature

Pursuant to the requirements of the Securities Exchange of 1934, Cboe BZX Exchange, Inc.
has duty caused this filing to be signed on its behalf by the undersigned thereunto duty authorized.

Date 12/23/2021

By Kyle Murray
(Name *)

(Title *)
VP, Associate General Counsel

NOTE: Clicking the signature block at right will initiate digitally signing the form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

[redacted] Date: 2021.12.23 18:00:18 -05'00'

Required fields are shown with yellow backgrounds and astericks.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

Form 19b-4 Information *

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21-039 Amendment No. 1 (Fidelity Bi

The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

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21-039 Amendment No. 1 Exhibit 1.dc

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A - Notice of Proposed Rule Change, Security-Based Swap Submission, or Advanced Notice by Clearing Agencies *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2- Notices, Written Comments, Transcripts, Other Communications

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Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

☐ Exhibit Sent As Paper Document

Exhibit 3 - Form, Report, or Questionnaire

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Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

☐ Exhibit Sent As Paper Document

Exhibit 4 - Marked Copies

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

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The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change

Partial Amendment

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If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1. Text of the Proposed Rule Change

(a) Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] and Rule 19b-4 thereunder,[2] Cboe BZX Exchange, Inc. (the "Exchange" or "BZX") is filing with the Securities and Exchange Commission ("Commission") a proposed rule change to list and trade shares of the Wise Origin Bitcoin Trust (the "Trust"),[3] under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares. The shares of the Trust are referred to herein as the "Shares."

(b) Not applicable.

(c) Not applicable.

2. Procedures of the Self-Regulatory Organization

(a) The Exchange's President (or designee) pursuant to delegated authority approved the proposed rule change on May 10, 2021.

(b) Please refer questions and comments on the proposed rule change to Patrick Sexton, Executive Vice President, General Counsel and Corporate Secretary, [redacted], or Kyle Murray, Vice President, Associate General Counsel, [redacted].

3. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change.

(a) Purpose

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1 15 U.S.C. 78s(b)(1).

2 17 CFR 240.19b-4.

3 The Trust was formed as a Delaware statutory trust on March 17, 2021 and is operated as a grantor trust for U.S. federal tax purposes. The Trust has no fixed termination date.

This Amendment No. 1 to SR-CboeBZX-2021-051 amends and replaces in its entirety the proposal as originally submitted on May 10, 2021. The Exchange submits this Amendment No. 1 in order to clarify certain points and add additional details to the proposal.

The Exchange proposes to list and trade the Shares of the Trust under BZX Rule 14.11(e)(4),[4] which governs the listing and trading of Commodity-Based Trust Shares on the Exchange.[5] FD Funds Management LLC is the sponsor of the Trust ("Sponsor"). The Shares will be registered with the Commission by means of the Trust's registration statement on Form S-1 (the "Registration Statement").[6] The Trust is not permitted or required to register under the Investment Company Act of 1940, as amended (the "1940 Act")[7], and therefore is not subject to regulation under the 1940 Act.[8] Further, the Registration Statement states that the Trust will not hold or trade in commodity interests regulated by the Commodity Exchange Act of 1936, as amended (the "CEA"), and

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4 The Commission approved BZX Rule 14.11(e)(4) in Securities Exchange Act Release No. 65225 (August 30, 2011), 76 FR 55148 (September 6, 2011) (SR-BATS-2011-018).

5 All statements and representations made in this filing regarding (a) the description of the portfolio, (b) limitations on portfolio holdings or reference assets, or (c) the applicability of Exchange rules and surveillance procedures shall constitute continued listing requirements for listing the Shares on the Exchange.

6 See draft Registration Statement on Form S-1, dated March 24, 2021 submitted to the Commission by the Sponsor on behalf of the Trust. The descriptions of the Trust, the Shares, and the Index (as defined below) contained herein are based, in part, on information in the Registration Statement. The Registration Statement is not yet effective and the Shares will not trade on the Exchange until such time that the Registration Statement is effective.

7 15 U.S.C. 80a-1.

8 See above.

therefore is not a commodity pool for purposes of the CEA.[9] The Exchange represents that upon approval of this proposal by the Commission, the Shares would satisfy the requirements of BZX Rule 14.11(e)(4) and thereby qualify for listing on the Exchange.

As further discussed below, the Commission has historically approved or disapproved exchange filings to list and trade series of Trust Issued Receipts, including spot-based Commodity-Based Trust Shares, on the basis of whether the listing exchange has in place a comprehensive surveillance sharing agreement with a regulated market of significant size related to the underlying commodity.[10] A survey of previously approved series of Commodity-Based Trust Shares and Currency Trust Shares makes clear that the spot markets for commodities and currencies held in such ETPs are generally unregulated. In fact, the Commission specifically noted in the Winklevoss Order that the first gold ETP approval order, which was also the first commodity-trust ETP, "was based on an assumption that the currency market and the spot gold market were largely unregulated."[11] This makes clear that the applicable standard is not whether the underlying commodity market itself is regulated. Further to this point, prior orders have also emphasized that in every prior approval order for Commodity-Based Trust Shares there was a regulated derivatives market of significant size, generally a Commodity

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9 See above.

10 See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018). This proposal was subsequently disapproved by the Commission. See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018) (the "Winklevoss Order").

11 See Winklevoss Order at 37592 and Exchange Act Release No. 50603 (Oct. 28, 2004), 69 FR 64614 (Nov. 5, 2004) (SR-NYSE-2004-22) (order approving the listing and trading of streetTRACKS Gold Shares) (the "First Gold Approval Order").

Futures Trading Commission (the "CFTC") regulated futures market.[12] Despite the lack of regulation of the underlying spot commodity and currency markets, the Commission

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[12] See Winklevoss Order at 37592. See also the First Gold Approval Order at 64618–19; iShares COMEX Gold Trust, Exchange Act Release No. 51058 (Jan. 19, 2005), 70 FR 3749, 3751, 3754–55 (Jan. 26, 2005) (SR-Amex-2004-38); iShares Silver Trust, Exchange Act Release No. 53521 (Mar. 20, 2006), 71 FR 14967, 14968, 14973–74 (Mar. 24, 2006) (SR-Amex-2005-072); ETFS Gold Trust, Exchange Act Release No. 59895 (May 8, 2009), 74 FR 22993, 22994–95, 22998, 23000 (May 15, 2009) (SR-NYSEArca-2009-40); ETFS Silver Trust, Exchange Act Release No. 59781 (Apr. 17, 2009), 74 FR 18771, 18772, 18775–77 (Apr. 24, 2009) (SR-NYSEArca-2009-28); ETFS Palladium Trust, Exchange Act Release No. 61220 (Dec. 22, 2009), 74 FR 68895, 68896 (Dec. 29, 2009) (SR-NYSEArca-2009-94) (notice of proposed rule change included NYSE Arca's representation that "[t]he most significant palladium futures exchanges are the NYMEX and the Tokyo Commodity Exchange," that "NYMEX is the largest exchange in the world for trading precious metals futures and options," and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which NYMEX is a member, Exchange Act Release No. 60971 (Nov. 9, 2009), 74 FR 59283, 59285–86, 59291 (Nov. 17, 2009)); ETFS Platinum Trust, Exchange Act Release No. 61219 (Dec. 22, 2009), 74 FR 68886, 68887–88 (Dec. 29, 2009) (SR-NYSEArca-2009-95) (notice of proposed rule change included NYSE Arca's representation that "[t]he most significant platinum futures exchanges are the NYMEX and the Tokyo Commodity Exchange," that "NYMEX is the largest exchange in the world for trading precious metals futures and options," and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which NYMEX is a member, Exchange Act Release No. 60970 (Nov. 9, 2009), 74 FR 59319, 59321, 59327 (Nov. 17, 2009)); Sprott Physical Gold Trust, Exchange Act Release No. 61496 (Feb. 4, 2010), 75 FR 6758, 6760 (Feb. 10, 2010) (SR-NYSEArca-2009-113) (notice of proposed rule change included NYSE Arca's representation that the COMEX is one of the "major world gold markets," that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," and that NYMEX, of which COMEX is a division, is a member of the Intermarket Surveillance Group, Exchange Act Release No. 61236 (Dec. 23, 2009), 75 FR 170, 171, 174 (Jan. 4, 2010)); Sprott Physical Silver Trust, Exchange Act Release No. 63043 (Oct. 5, 2010), 75 FR 62615, 62616, 62619, 62621 (Oct. 12, 2010) (SR-NYSEArca-2010-84); ETFS Precious Metals Basket Trust, Exchange Act Release No. 62692 (Aug. 11, 2010), 75 FR 50789, 50790 (Aug. 17, 2010) (SR-NYSEArca-2010-56) (notice of proposed rule change included NYSE Arca's representation that "the most significant gold, silver, platinum and palladium futures exchanges are the COMEX and the TOCOM" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member,

Exchange Act Release No. 62402 (Jun. 29, 2010), 75 FR 39292, 39295, 39298 (July 8, 2010)); ETFS White Metals Basket Trust, Exchange Act Release No. 62875 (Sept. 9, 2010), 75 FR 56156, 56158 (Sept. 15, 2010) (SR-NYSEArca-2010-71) (notice of proposed rule change included NYSE Arca's representation that "the most significant silver, platinum and palladium futures exchanges are the COMEX and the TOCOM" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 62620 (July 30, 2010), 75 FR 47655, 47657, 47660 (Aug. 6, 2010)); ETFS Asian Gold Trust, Exchange Act Release No. 63464 (Dec. 8, 2010), 75 FR 77926, 77928 (Dec. 14, 2010) (SR-NYSEArca-2010-95) (notice of proposed rule change included NYSE Arca's representation that "the most significant gold futures exchanges are the COMEX and the Tokyo Commodity Exchange," that "COMEX is the largest exchange in the world for trading precious metals futures and options," and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 63267 (Nov. 8, 2010), 75 FR 69494, 69496, 69500–01 (Nov. 12, 2010)); Sprott Physical Platinum and Palladium Trust, Exchange Act Release No. 68430 (Dec. 13, 2012), 77 FR 75239, 75240–41 (Dec. 19, 2012) (SR-NYSEArca-2012-111) (notice of proposed rule change included NYSE Arca's representation that "[f]utures on platinum and palladium are traded on two major exchanges: The New York Mercantile Exchange ... and Tokyo Commodities Exchange" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 68101 (Oct. 24, 2012), 77 FR 65732, 65733, 65739 (Oct. 30, 2012)); APMEX Physical—1 oz. Gold Redeemable Trust, Exchange Act Release No. 66930 (May 7, 2012), 77 FR 27817, 27818 (May 11, 2012) (SR-NYSEArca- 2012-18) (notice of proposed rule change included NYSE Arca's representation that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, and that gold futures are traded on COMEX and the Tokyo Commodity Exchange, with a cross-reference to the proposed rule change to list and trade shares of the ETFS Gold Trust, in which NYSE Arca represented that COMEX is one of the "major world gold markets," Exchange Act Release No. 66627 (Mar. 20, 2012), 77 FR 17539, 17542–43, 17547 (Mar. 26, 2012)); JPM XF Physical Copper Trust, Exchange Act Release No. 68440 (Dec. 14, 2012), 77 FR 75468, 75469–70, 75472, 75485–86 (Dec. 20, 2012) (SR-NYSEArca-2012-28); iShares Copper Trust, Exchange Act Release No. 68973 (Feb. 22, 2013), 78 FR 13726, 13727, 13729–30, 13739–40 (Feb. 28, 2013) (SR-NYSEArca-2012-66); First Trust Gold Trust, Exchange Act Release No. 70195 (Aug. 14, 2013), 78 FR 51239, 51240 (Aug. 20, 2013) (SR-NYSEArca-2013-61) (notice of proposed rule change included NYSE Arca's representation that FINRA, on behalf of the exchange, may obtain trading information regarding gold futures and options on gold futures from members of the Intermarket Surveillance Group, including COMEX, or from markets "with which [NYSE Arca] has in place a comprehensive surveillance sharing

approved series of Currency and Commodity-Based Trust Shares, including those that held gold, silver, platinum, palladium, copper, and other commodities and currencies, because it determined that the futures markets for these commodities and currencies represented regulated markets of significant size and that the listing exchange had a surveillance sharing agreement in place with that market.[13]

The Exchange acknowledges that unregulated currency and commodity markets do not provide the same protections as the markets that are subject to the Commission's oversight. However, the Commission has consistently looked to surveillance sharing agreements with an underlying futures market to determine whether ETPs holding currency or commodities were consistent with the Act, as established above. As such, the Commission's regulated market of significant size test does not require that the spot bitcoin market be regulated to approve this proposal. To the contrary, precedent makes clear that any requirement that the spot bitcoin market be a "regulated market" prior to

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agreement," and that gold futures are traded on COMEX and the Tokyo Commodity Exchange, with a cross-reference to the proposed rule change to list and trade shares of the ETFS Gold Trust, in which NYSE Arca represented that COMEX is one of the "major world gold markets," Exchange Act Release No. 69847 (June 25, 2013), 78 FR 39399, 39400, 39405 (July 1, 2013)); Merk Gold Trust, Exchange Act Release No. 71378 (Jan. 23, 2014), 79 FR 4786, 4786–87 (Jan. 29, 2014) (SR-NYSEArca-2013-137) (notice of proposed rule change included NYSE Arca's representation that "COMEX is the largest gold futures and options exchange" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," including with respect to transactions occurring on COMEX pursuant to CME and NYMEX's membership, or from exchanges "with which [NYSE Arca] has in place a comprehensive surveillance sharing agreement," Exchange Act Release No. 71038 (Dec. 11, 2013), 78 FR 76367, 76369, 76374 (Dec. 17, 2013)); Long Dollar Gold Trust, Exchange Act Release No. 79518 (Dec. 9, 2016), 81 FR 90876, 90881, 90886, 90888 (Dec. 15, 2016) (SR-NYSEArca-2016-84).

13 Id.

approval would be incongruous with all prior spot commodity and currency approval orders. With this in mind, the CME Bitcoin Futures market is the proper market for the Commission to consider in determining whether this proposal is consistent with the Act. The Exchange has a comprehensive surveillance sharing agreement in place with CME, which operates a bitcoin futures market that, as established by the included analysis below, represents a regulated market of significant size related to the underlying commodity (bitcoin) to be held by the Trust. Therefore, both the Exchange and Sponsor believe that the CME Bitcoin Futures market satisfies the standard that the Commission has applied to all previously approved series of Commodity-Based Trust Shares and that this proposal should be approved.

Background

Bitcoin is a digital asset based on the decentralized, open source protocol of the peer-to- peer computer network launched in 2009 that governs the creation, movement, and ownership of bitcoin and hosts the public ledger, or "blockchain," on which all bitcoin transactions are recorded (the "Bitcoin Network" or "Bitcoin"). The decentralized nature of the Bitcoin Network allows parties to transact directly with one another based on cryptographic proof instead of relying on a trusted third party. The protocol also lays out the rate of issuance of new bitcoin within the Bitcoin Network, a rate that is reduced by half approximately every four years with an eventual hard cap of 21 million. It is generally understood that the combination of these two features—a

systemic hard cap of 21 million bitcoin and the ability to transact trustlessly with anyone connected to the Bitcoin Network—gives bitcoin its value.[14]

The first rule filing proposing to list an exchange-traded product to provide exposure to bitcoin in the U.S. was submitted by the Exchange on June 30, 2016.[15] At that time, blockchain technology, and digital assets that utilized it, were relatively new to the broader public. The market cap of all bitcoin in existence at that time was approximately $10 billion. No registered offering of digital asset securities or shares in an investment vehicle with exposure to bitcoin or any other cryptocurrency had yet been conducted, and the regulated infrastructure for conducting a digital asset securities offering had not begun to develop.[16] Similarly, regulated U.S. CME Bitcoin Futures did not exist. The CFTC had determined that bitcoin is a commodity,[17] but had not engaged

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14 For additional information about bitcoin and the Bitcoin Network, see https://bitcoin.org/en/getting-started; https://www.fidelitydigitalassets.com/articles/addressing-bitcoin-criticisms; and https://www.vaneck.com/education/investment-ideas/investing-in-bitcoin-and-digital-assets/.

15 See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018) (the "Winklevoss Order"). This proposal was subsequently disapproved by the Commission.

16 Digital assets that are securities under U.S. law are referred to throughout this proposal as "digital asset securities." All other digital assets, including bitcoin, are referred to interchangeably as "cryptocurrencies" or "virtual currencies." The term "digital assets" refers to all digital assets, including both digital asset securities and cryptocurrencies, together.

17 See "In the Matter of Coinflip, Inc." ("Coinflip") (CFTC Docket 15-29 (September 17, 2015)) (order instituting proceedings pursuant to Sections 6(c) and 6(d) of the CEA, making findings and imposing remedial sanctions), in which the CFTC stated:

"Section 1a(9) of the CEA defines 'commodity' to include, among other things, 'all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in.' 7 U.S.C. § 1a(9). The definition of a

in significant enforcement actions in the space. The New York Department of Financial Services ("NYDFS") adopted its final BitLicense regulatory framework in 2015, but had only approved four entities to engage in activities relating to virtual currencies (whether through granting a BitLicense or a limited- purpose trust charter) as of June 30, 2016.[18] While the first over-the-counter bitcoin fund launched in 2013, public trading was limited and the fund had only $60 million in assets.[19] There were very few, if any, traditional financial institutions engaged in the space, whether through investment or providing services to digital asset companies. In January 2018, the Staff of the Commission noted in a letter to the Investment Company Institute and SIFMA that it was not aware, at that time, of a single custodian providing fund custodial services for digital assets.[20]

Fast forward to the first quarter of 2021 and the digital assets financial ecosystem, including bitcoin, has progressed significantly. The development of a regulated market

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'commodity' is broad. See, e.g., Board of Trade of City of Chicago v. SEC, 677 F. 2d 1137, 1142 (7th Cir. 1982). Bitcoin and other virtual currencies are encompassed in the definition and properly defined as commodities."

18 A list of virtual currency businesses that are entities regulated by the NYDFS is available on the NYDFS website. See https://www.dfs.ny.gov/apps_and_licensing/virtual_currency_businesses/regulated_entities

19 Data as of March 31, 2016 according to publicly available filings. See Bitcoin Investment Trust Form S-1, dated May 27, 2016, available: https://www.sec.gov/Archives/edgar/data/1588489/000095012316017801/filename1.htm.

20 See letter from Dalia Blass, Director, Division of Investment Management, U.S. Securities and Exchange Commission to Paul Schott Stevens, President & CEO, Investment Company Institute and Timothy W. Cameron, Asset Management Group - Head, Securities Industry and Financial Markets Association (January 18, 2018), available at: https://www.sec.gov/divisions/investment/noaction/2018/cryptocurrency-011818.htm.

for digital asset securities has significantly evolved, with market participants having conducted registered public offerings of both digital asset securities[21] and shares in investment vehicles holding CME Bitcoin Futures.[22] Additionally, licensed and regulated service providers have emerged to provide fund custodial services for digital assets, among other services. For example, in December 2020, the Commission adopted a conditional no-action position permitting certain special purpose broker-dealers to custody digital asset securities under Rule 15c3-3 under the Exchange Act;[23] in September 2020, the Staff of the Commission released a no-action letter permitting certain broker-dealers to operate a non-custodial Alternative Trading System ("ATS") for digital asset securities, subject to specified conditions;[24] in October 2019, the Staff of the Commission granted temporary relief from the clearing agency registration requirement to an entity seeking to establish a securities clearance and settlement system based on

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21 See Prospectus supplement filed pursuant to Rule 424(b)(1) for INX Tokens (Registration No. 333-233363), available at: https://www.sec.gov/Archives/edgar/data/1725882/000121390020023202/ea125858-424b1_inxlimited.htm.

22 See Prospectus filed by Stone Ridge Trust VI on behalf of NYDIG Bitcoin Strategy Fund Registration, available at: https://www.sec.gov/Archives/edgar/data/1764894/000119312519309942/d693146d497. htm.

23 See Securities Exchange Act Release No. 90788, 86 FR 11627 (February 26, 2021) (File Number S7-25-20) (Custody of Digital Asset Securities by Special Purpose Broker- Dealers).

24 See letter from Elizabeth Baird, Deputy Director, Division of Trading and Markets, U. S. Securities and Exchange Commission to Kris Dailey, Vice President, Risk Oversight & Operational Regulation, Financial Industry Regulatory Authority (September 25, 2020), available at: https://www.sec.gov/divisions/marketreg/mr-noaction/2020/finra-ats-role-in- settlement-of-digital-asset-security-trades-09252020.pdf

distributed ledger technology,[25] and multiple transfer agents who provide services for digital asset securities registered with the Commission.[26]

Regulatory Developments

Outside the Commission's purview, the regulatory landscape has changed significantly since 2016, and cryptocurrency markets have grown and evolved as well. The market for bitcoin is approximately 100 times larger, having recently reached a market cap of over $1 trillion. According to the CME Bitcoin Futures Report, from October 25, 2021 through November 19, 2021, CFTC regulated bitcoin futures represented approximately $2.9 billion in notional trading volume on Chicago Mercantile Exchange ("CME") ("CME Bitcoin Futures") on a daily basis and notional volume was never below $1.2 billion per day.[27] Open interest was over $4 billion for the entirety of the period and at one point reached $5.5 billion. The CFTC has exercised its regulatory jurisdiction in bringing a number of enforcement actions related to bitcoin and against trading platforms that offer cryptocurrency trading.[28] The U.S. Office of the Comptroller

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25 See letter from Jeffrey S. Mooney, Associate Director, Division of Trading and Markets, U.S. Securities and Exchange Commission to Charles G. Cascarilla & Daniel M. Burstein, Paxos Trust Company, LLC (October 28, 2019), available at: https://www. sec.gov/divisions/marketreg/mr-noaction/2019/paxos-trust-company-102819-17a.pdf

26 See, e.g., Form TA-1/A filed by Tokensoft Transfer Agent LLC (CIK: 0001794142) on January 8, 2021, available at: https://www.sec.gov/Archives/edgar/data/1794142/000179414219000001/xslFTA1X01/primary_doc.xml.

27 Data sourced from the CME Bitcoin Futures Report: 19 Nov, 2021, available at: https://www.cmegroup.com/ftp/bitcoinfutures/Bitcoin_Futures_Liquidity_Report.pdf.

28 The CFTC's annual report for Fiscal Year 2020 (which ended on September 30, 2020) noted that the CFTC "continued to aggressively prosecute misconduct involving digital assets that fit within the CEA's definition of commodity" and

of the Currency (the "OCC") has made clear that federally-chartered banks are able to provide custody services for cryptocurrencies and other digital assets.[29] The OCC recently granted conditional approval of two charter conversions by state-chartered trust companies to national banks, both of which provide cryptocurrency custody services.[30] NYDFS has granted no fewer than twenty-five BitLicenses, including to established public payment companies like PayPal Holdings, Inc. and Square, Inc., and limited purpose trust charters to entities providing cryptocurrency custody services, including the Trust's Custodian. The U.S. Treasury Financial Crimes Enforcement Network ("FinCEN") has released extensive guidance regarding the applicability of the Bank Secrecy Act ("BSA") and implementing regulations to virtual currency businesses,[31] and has proposed rules imposing requirements on entities subject to the BSA that are specific

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"brought a record setting seven cases involving digital assets." See CFTC FY2020 Division of Enforcement Annual Report, available at: https://www.cftc.gov/media/5321/DOE_FY2020_AnnualReport_120120/download. The CFTC also filed on October 1, 2020, a civil enforcement action against the owner/operators of the BitMEX trading platform, which was one of the largest bitcoin derivative exchanges. See CFTC Release No. 8270-20 (October 1, 2020) available at: https://www.cftc.gov/PressRoom/PressReleases/8270-20. The CFTC also ordered Coinbase Inc. to pay $6.5 million for false, misleading, or inaccurate reporting and wash trading on March 19, 2021. See CFTC Release No. 8369-21 (March 19, 2021) available at: https://cftc.gov/PressRoom/PressReleases/8369-21.

29 See OCC News Release 2021-2 (January 4, 2021) available at: https://www.occ.gov/news-issuances/news-releases/2021/nr-occ-2021-2.html.

30 See OCC News Release 2021-6 (January 13, 2021) available at: https://www.occ.gov/news-issuances/news-releases/2021/nr-occ-2021-6.html and OCC News Release 2021-19 (February 5, 2021) available at: https://www.occ.gov/news- issuances/news-releases/2021/nr-occ-2021-19.html.

31 See FinCEN Guidance FIN-2019-G001 (May 9, 2019) (Application of FinCEN's Regulations to Certain Business Models Involving Convertible Virtual Currencies) available at: https://www.fincen.gov/sites/default/files/2019-05/FinCEN%20Guidance%20CVC%20FINAL%20508.pdf

to the technological context of virtual currencies.[32] In addition, the Treasury's Office of Foreign Assets Control ("OFAC") has brought enforcement actions over apparent violations of the sanctions laws in connection with the provision of wallet management services for digital assets.[33]

U.S. Regulated Bitcoin Futures Market Growth and Maturation

CME began offering trading in futures on bitcoin in 2017. Each contract represents five bitcoin and is based on the CME CF Bitcoin Reference Rate ("BRR").[34] The contracts trade and settle like other cash-settled commodity futures contracts. Nearly every measurable metric related to CME Bitcoin Futures has trended consistently up since launch and/or accelerated upward in the past year. For example, $7.1 trillion in CME Bitcoin Futures traded in the second quarter of 2021, compared to $200 billion and $1.3 trillion in the first quarters of 2019 and 2020, respectively. CME Bitcoin Futures

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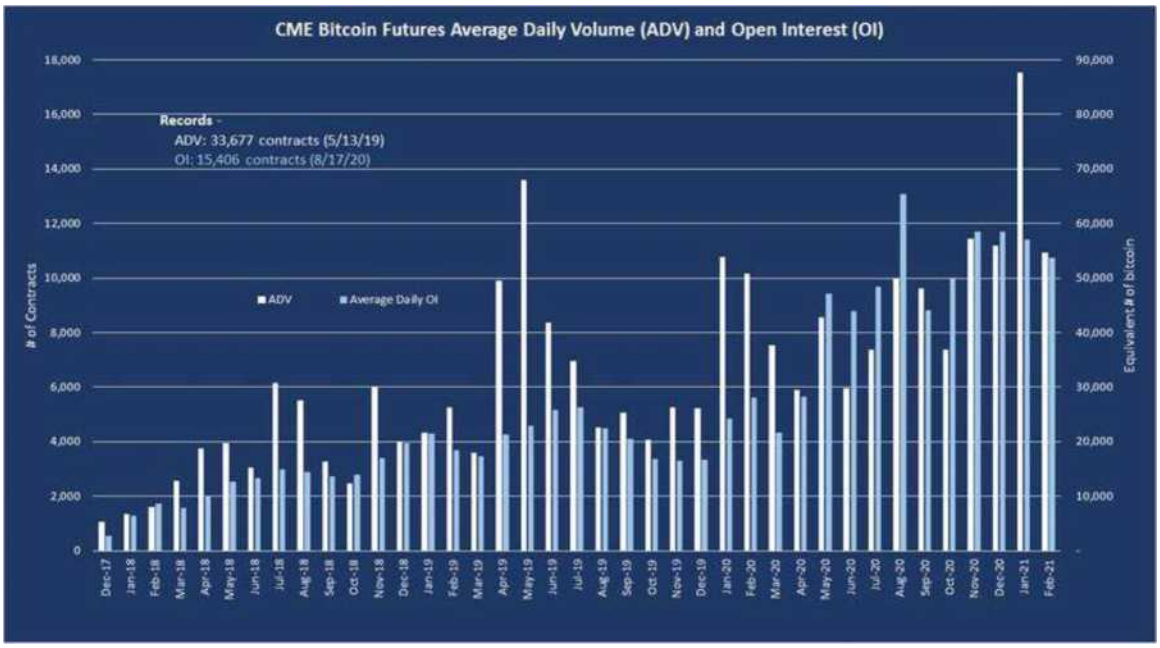
32 See U.S. Department of the Treasury Press Release: "The Financial Crimes Enforcement Network Proposes Rule Aimed at Closing Anti-Money Laundering Regulatory Gaps for Certain Convertible Virtual Currency and Digital Asset Transactions" (December 18, 2020), available at: https://home.treasury.gov/news/press-releases/sm1216.

33 See U.S. Department of the Treasury Enforcement Release: "OFAC Enters Into $98,830 Settlement with BitGo, Inc. for Apparent Violations of Multiple Sanctions Programs Related to Digital Currency Transactions" (December 30, 2020) available at: https://home.treasury.gov/system/files/126/20201230_bitgo.pdf.

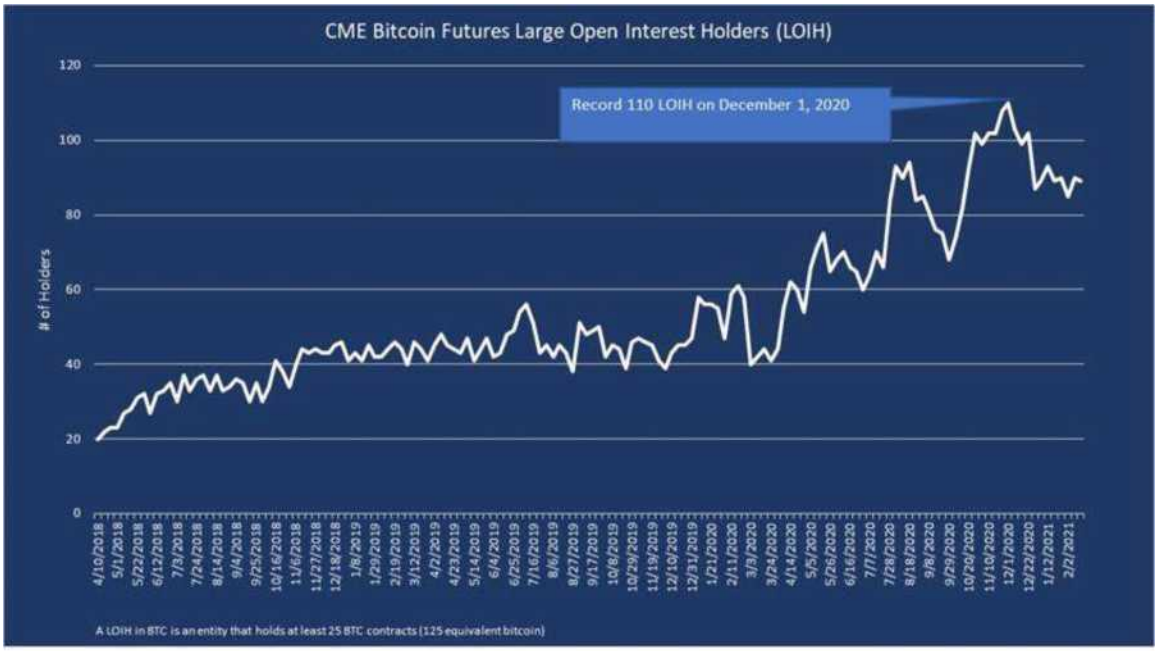
34 According to CME, the CME CF Bitcoin Reference Rate aggregates the trade flow of major bitcoin spot exchanges during a specific calculation window into a once-a-day reference rate of the U.S. dollar price of bitcoin. Calculation rules are geared toward maximum transparency and real-time replicability in underlying spot markets, including Bitstamp, Coinbase, Gemini, itBit, and Kraken. For additional information, refer to https://www.cmegroup.com/trading/cryptocurrency-indices/cf-bitcoin-reference-rate.html?redirect=/trading/cf-bitcoin-reference-rate.html.

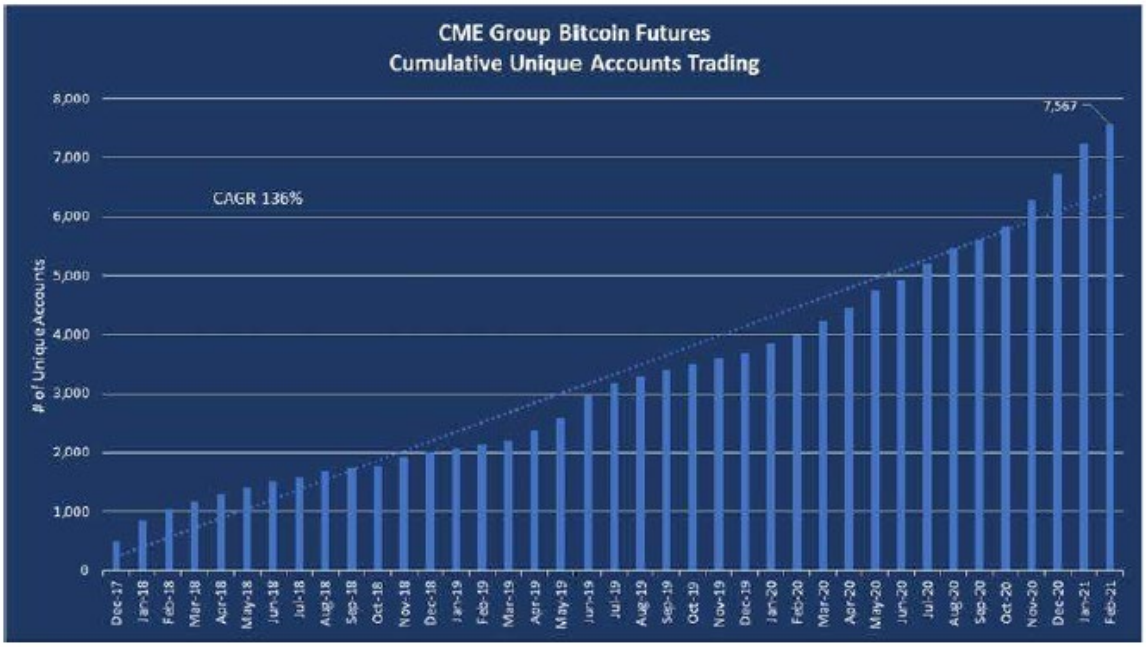
traded over $500 million and represented $1.5 billion in open interest on the CME in open interest compared to $115 million in December 2019. This general upward trend in trading volume and open interest is captured in the following chart.



Similarly, the number of large open interest holders[35] has continued to increase even as the price of bitcoin has risen, as have the number of unique accounts trading CME Bitcoin Futures.

35 A large open interest holder in CME Bitcoin Futures is an entity that holds at least 25 contracts, which is the equivalent of 125 bitcoin. At a price of approximately $46,996 per bitcoin on 8/31/21, more than 80 firms had outstanding positions of greater than $5.8 million in CME Bitcoin Futures.





In addition to the regulatory developments laid out above, more traditional financial market participants appear to be embracing cryptocurrency: large insurance

companies,[36] asset managers,[37] university endowments,[38] pension funds,[39] and even historically bitcoin skeptical fund managers[40] are allocating to bitcoin. The largest over-the-counter bitcoin fund previously filed a Form 10 registration statement, which the Staff of the Commission reviewed and which took effect automatically, and is now a

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36 December 10, 2020, Massachusetts Mutual Life Insurance Company (MassMutual) announced that it had purchased $100 million in bitcoin for its general investment account. See MassMutual Press Release "Institutional Bitcoin provider NYDIG announces minority stake purchase by MassMutual" (December 10, 2020) available at: https://www.massmutual.com/about-us/news-and-press-releases/press-releases/2020/12/institutional-bitcoin-provider-nydig-announces-minority-stake-purchase-by-massmutual.

37 See e.g., "BlackRock's Rick Rieder says the world's largest asset manager has 'started to dabble' in bitcoin" (February 17, 2021) available at: https://www.cnbc.com/2021/02/17/blackrock-has-started-to-dabble-in-bitcoin-says-rick- rieder.html and "Guggenheim's Scott Minerd Says Bitcoin Should Be Worth $400,000" (December 16, 2020) available at: https://www.bloomberg.com/news/articles/2020-12-16/guggenheim-s-scott-minerd-says-bitcoin-should-be-worth-400-000.

38 See e.g., "Harvard and Yale Endowments Among Those Reportedly Buying Crypto" (January 25, 2021) available at: https://www.bloomberg.com/news/articles/2021-01- 26/harvard-and-yale-endowments-among-those-reportedly-buying-crypto.

39 See e.g., "Virginia Police Department Reveals Why its Pension Fund is Betting on Bitcoin" (February 14, 2019) available at: https://finance.yahoo.com/news/virginia-police-department-reveals-why-194558505.html.

40 See e.g., "Bridgewater: Our Thoughts on Bitcoin" (January 28, 2021) available at: https://www.bridgewater.com/research-and-insights/our-thoughts-on-bitcoin and "Paul Tudor Jones says he likes bitcoin even more now, rally still in the 'first inning'" (October 22, 2020) available at: https://www.cnbc.com/2020/10/22/-paul-tudor-jones-says-he-likes-bitcoin-even-more-now-rally-still-in-the-first-inning.html.

reporting company.[41] Established companies like Tesla, Inc.,[42] MicroStrategy Incorporated,[43] and Square, Inc.,[44] among others, have recently announced substantial investments in bitcoin in amounts as large as $1.5 billion (Tesla) and $425 million (MicroStrategy). Suffice to say, bitcoin is on its way to gaining mainstream usage.

As noted above, institutional adoption and investor interest in bitcoin has increased significantly over the last 2.5 years. A recent independent investor survey, The Institutional Investors Digital Asset Survey (the "Survey")[45] conducted by Fidelity

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41 See Letter from Division of Corporation Finance, Office of Real Estate & Construction to Barry E. Silbert, Chief Executive Officer, Grayscale Bitcoin Trust (January 31, 2020) https://www.sec.gov/Archives/edgar/data/1588489/000000000020000953/filename1.pdf

42 See Form 10-K submitted by Tesla, Inc. for the fiscal year ended December 31, 2020 at 23: https://www.sec.gov/ix?doc=/Archives/edgar/data/1318605/000156459021004599/tsla-10k_20201231.htm

43 See Form 10-Q submitted by MicroStrategy Incorporated for the quarterly period ended September 30, 2020 at 8: https://www.sec.gov/ix?doc=/Archives/edgar/data/1050446/000156459020047995/mstr-10q_20200930.htm

44 See Form 10-Q submitted by Square, Inc. for the quarterly period ended September 30, 2020 at 51: https://www.sec.gov/ix?doc=/Archives/edgar/data/ 1512673/000 1512673200000 12/sq-20200930.htm

45 The Survey included interviews with 774 institutional investors. 393 respondents were based in the U.S. and 381 respondents were based in Europe. The Survey spanned a variety of investor segments, including high-net worth individuals, financial advisors, family offices, crypto hedge and venture funds, traditional hedge funds, endowments and foundations. The first installment of The Institutional Investors Digital Assets Survey covered the period of November 2018 to January 2019 and surveyed over 400 U.S. investors. Thus, the year-over-year comparisons compare only the responses of U.S. investors. The Survey is available at the following link: https://www.fidelitydigitalassets.com/bin-public/060_www_fidelity_com/documents/FDAS/institutional-investors-digital-asset-survey.pdf.

Digital Assets, Fidelity Center for Applied Technology and Fidelity Consulting in collaboration with Greenwich Associates from November 2019 to early March 2020 found that (i) 36% of institutional investors surveyed currently invest in digital assets; (ii) almost 60% of all investors surveyed have a neutral or positive perception toward digital assets; and (iii) more than 80% of investors indicated they would be interested in institutional investment products that hold digital assets. The Survey reported that the portion of U.S. investors who have an allocation to digital assets increased to 27% from 22% in 2019 and cited multiple factors that may be driving ownership including, but not limited to, the entrance of incumbent custody, trading and derivatives service providers; and the expansion of the types of regulated derivatives available to institutional investors, which fueled awareness of digital assets.

The Survey reported that exposure to digital assets continues to grow with 22% of U.S. respondents invested in digital assets having exposure via futures, a substantial increase relative to 9% of U.S. investors surveyed in 2019. The Survey also reported that 91% of institutional investors that plan to make an allocation to digital assets expect to have at least 0.5% of their portfolio in digital assets within five years. The increase in institutional use and interest in the digital asset market is a benefit to all investors. As institutional participation increases, this helps to solidify the market for digital assets and assists in maturing the ecosystem for digital assets, creating a sounder structure for this asset class. Exchange Traded Products ("ETPs") are well established vehicles with a structure that has proven to be beneficial to investors based on the transparency, competition with respect to fees charged, and disclosures to help educate investors on risks associated with investment.

In 2021, Fidelity Digital Assets, Fidelity Center for Applied Technology and Fidelity Consulting, again in collaboration with Greenwich Associates, performed a new survey of 1,100 institutional investors.[46] The new survey took place between December 2, 2020 and April 2, 2021. The survey found that 33% of U.S. institutional investors indicated that they currently invest in digital assets and 18% do so through buying an investment product that holds digital assets. The survey also found that 69% of U.S. institutional investors indicated that digital assets should be part of an investment portfolio, and that 38% of U.S. institutional investors rated a bitcoin ETP as "appealing."

The Exchange believes that the significant increase in investor participation in and institutional adoption of bitcoin have facilitated the maturation of the bitcoin trading ecosystem.

Wise Origin Bitcoin Trust

The Registration Statement includes the following description of the Trust and its operations. The Trust will issue Shares that represent fractional undivided beneficial interests in and ownership of the Trust. The Trust is a Delaware statutory trust that operates pursuant to the Declaration of Trust and Trust Agreement (the "Trust Agreement"), between Sponsor and Delaware Trust Company, the Delaware trustee of the Trust (the "Trustee"). Sponsor manages the Trust and is responsible for the ongoing registration of the Shares. The Trust will engage Fidelity Service Company, Inc. ("FSC"), a Sponsor affiliate, to be the administrator ("Administrator"). A third-party

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46 For more information, see Memorandum from the Division of Trading and Markets regarding a September 8, 2021 meeting with representatives from Fidelity Digital Assets, et al. (Sept. 8, 2021) *available at* https://www.sec.gov/comments/sr-cboebzx-2021-039/srcboebzx2021039-250110.pdf.

transfer agent (the "Transfer Agent") will facilitate the issuance and redemption of Shares of the Trust and respond to correspondence by Trust Shareholders and others relating to its duties, maintain Shareholder accounts, and make periodic reports to the Trust.[47] Another affiliate of Sponsor, Fidelity Distributors Corporation, will be the marketing agent ("Marketing Agent") in connection with the creation and redemption of "Baskets" of Shares. The Sponsor will provide assistance in the marketing of the Shares. Fidelity Digital Assets Services, LLC ("FDAS"), another Sponsor affiliate, will serve as the Trust's bitcoin custodian (the "Custodian").

According to the Registration Statement, the Trust is neither an investment company registered under the 1940 Act, nor a commodity pool for purposes of the CEA, and neither the Trust nor the Sponsor is subject to regulation as a commodity pool operator or a commodity trading adviser in connection with the Shares.

The Trust's investment objective is to seek to track the performance of bitcoin, as measured by the performance of the Fidelity Bitcoin Index PR (the "Index"), less the Trust's expenses and other liabilities. In seeking to achieve its investment objective, the Trust will hold bitcoin and will value its Shares daily as of 4:00 p.m. Eastern time using the same methodology used to calculate the Index and process all creations and redemptions in transactions with authorized participants. The Trust is not actively managed.

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47 The Exchange notes that the Sponsor is finalizing negotiations with several service providers and it will submit an amendment to this proposal upon finalization of those arrangements.

The Custodian

The Sponsor has selected FDAS to be the Trust's Custodian. FDAS is a New York state limited liability trust[48] that serves as bitcoin custodian to institutional and individual investors. The Custodian maintains a substantial portion of the private keys associated with the Trust's bitcoin in "cold storage" or similarly secure technology. Cold storage is a safeguarding method with multiple layers of protections and protocols, by which the private key(s) corresponding to the Trust's bitcoin is (are) generated and stored in an offline manner. Private keys are generated in offline computers that are not connected to the internet so that they are resistant to being hacked. Cold storage of private keys may involve keeping such keys on a non-networked computer or electronic device or storing the public key and private keys on a storage device (for example, a USB thumb drive) or printed medium and deleting the keys from all computers.

The Custodian may receive deposits of bitcoin but may not send bitcoin without use of the corresponding private keys. In order to send bitcoin when the private keys are kept in cold storage, either the private keys must be retrieved from cold storage and entered into a software program to sign the transaction, or the unsigned transaction must be sent to the "cold" server in which the private keys are held for signature by the private

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48 New York state trust companies are subject to rigorous oversight similar to other types of entities, such as nationally chartered banking entities, that hold customer assets. Like national banks, they must obtain specific approval of their primary regulator for the exercise of their fiduciary powers. Moreover, limited purpose trust companies engaged in the custody of digital assets are subject to even more stringent requirements than national banks which, following initial approval of trust powers, generally can exercise those powers broadly without further approval of the OCC. In contrast, NYDFS requires in their approval orders that limited purpose trust companies obtain separate approval for all material changes in business.

keys. At that point, the Custodian can transfer the bitcoin. The Trust's Transfer Agent will facilitate the settlement of Shares in response to the placement of creation orders and redemption orders from Authorized Participants. The Trust generally does not intend to hold cash or cash equivalents. However, there may be situations where the Trust will hold cash on a temporary basis. The Trust will enter into a cash custody agreement with an unaffiliated regulated bank as custodian of the Trust's cash and cash equivalents.

The Index

The Index is designed to reflect the performance of bitcoin in U.S. dollars. The current exchange composition of the Index is Bitstamp, Coinbase, Gemini, itBit and Kraken. The Index methodology was developed by Fidelity Product Services, LLC (the "Index Provider") and is administered by the Fidelity Index Committee. Coin Metrics, Inc. is the third-party calculation agent for the Index.[49]

The Index is constructed using bitcoin price feeds from eligible bitcoin spot markets and a volume-weighted median price ("VWMP") methodology, calculated every 15 seconds based on VWMP spot market data over rolling 5-minute increments to develop a bitcoin price composite. The Index market value is the volume-weighted median price of bitcoin in U.S. dollars over the previous five minutes, which is calculated by (1) ordering all individual transactions on eligible spot markets over the previous five minutes by price, and then (2) selecting the price associated with the 50th percentile of total volume. Using rolling five-minute segments means malicious actors would need to sustain efforts to manipulate the market over an extended period of time, or such malicious actors would need to replicate efforts multiple times across eligible bitcoin spot

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[49] The Sponsor's affiliates have an ownership interest in Coin Metrics, Inc.

markets, potentially triggering review. This extended period also supports authorized participant activity by capturing volume over a longer time period, rather than forcing authorized participants to mark an individual close or auction. The use of a median price reduces the ability of outlier prices to impact the NAV, as it systematically excludes those prices from the NAV calculation. The use of a volume-weighted median (as opposed to a traditional median) serves as an additional protection against attempts to manipulate the NAV by executing a large number of low-dollar trades, because any manipulation attempt would have to involve a majority of global spot bitcoin volume in a three-minute window to have any influence on the NAV. Further, removing the highest and lowest prices further protects against attempts to manipulate the NAV, requiring bad actors to act on multiple eligible bitcoin spot markets at once to have any ability to influence the price.

Availability of Information

In addition to the price transparency of the Index, the Trust will provide information regarding the Trust's bitcoin holdings as well as additional data regarding the Trust. The Trust will provide an Intraday Indicative Value ("IIV") per Share updated every 15 seconds, as calculated by the Exchange or a third-party financial data provider during the Exchange's Regular Trading Hours (9:30 a.m. to 4:00 p.m. Eastern time). The IIV will be calculated by using the prior day's closing NAV per Share as a base and updating that value during Regular Trading Hours to reflect changes in the value of the Trust's bitcoin holdings during the trading day.

The IIV disseminated during Regular Trading Hours should not be viewed as an actual real-time update of the NAV, which will be calculated only once at the end of each

trading day. The IIV will be widely disseminated on a per Share basis every 15 seconds during the Exchange's Regular Trading Hours by one or more major market data vendors. In addition, the IIV will be available through on-line information services.

The website for the Trust, which will be publicly accessible at no charge, will contain the following information: (a) the current NAV per Share daily and the prior business day's NAV and the reported closing price; (b) the BZX Official Closing Price[50] in relation to the NAV as of the time the NAV is calculated and a calculation of the premium or discount of such price against such NAV; (c) data in chart form displaying the frequency distribution of discounts and premiums of the Official Closing Price against the NAV, within appropriate ranges for each of the four previous calendar quarters (or for the life of the Trust, if shorter); (d) the prospectus; and other applicable quantitative information. The Trust will also disseminate the Trust's holdings on a daily basis on the Trust's website. The value of the Index will be made available by one or more major market data vendors, updated at least every 15 seconds during Regular Trading Hours.

The NAV for the Trust will be calculated by the Administrator once a day and will be disseminated daily to all market participants at the same time. Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the Consolidated Tape Association ("CTA").

Quotation and last sale information for bitcoin is widely disseminated through a variety of major market data vendors, including Bloomberg and Reuters, as well as the

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[50] As defined in Rule 11.23(a)(3), the term "BZX Official Closing Price" shall mean the price disseminated to the consolidated tape as the market center closing trade.

Index. Information relating to trading, including price and volume information, in bitcoin is available from major market data vendors and from the exchanges on which bitcoin are traded. Depth of book information is also available from bitcoin exchanges. The normal trading hours for bitcoin exchanges are 24 hours per day, 365 days per year.

Net Asset Value

As described in the Registration Statement, for purposes of calculating the Trust's NAV per Share, the Trust's holdings of bitcoin will be valued using the same methodology as used to calculate the Index. NAV means the total assets of the Trust including, but not limited to, all bitcoin and cash, if any, less total liabilities of the Trust, each determined on the basis of generally accepted accounting principles. The NAV of the Trust is calculated by taking the fair market value of its total assets based on the volume-weighted median price of bitcoin used for the calculation of the Index, subtracting any liabilities (which include accrued expenses), and dividing that total by the total number of outstanding Shares. The Administrator calculates the NAV of the Trust once each Exchange trading day. The NAV for a normal trading day will be released after 4:00 p.m. Eastern time. Trading during the core trading session on the Exchange typically closes at 4:00 p.m. Eastern time. However, NAVs are not officially struck until later in the day (often by 5:30 p.m. Eastern time and almost always by 8:00 p.m. Eastern time). The pause between 4:00 p.m. Eastern time and 5:30 p.m. Eastern time (or later) provides an opportunity to algorithmically detect, flag, investigate, and correct unusual pricing should it occur.

Creation and Redemption of Shares

When the Trust sells or redeems its Shares, it will do so in "in-kind" transactions in blocks of Shares (a "Creation Basket") at the Trust's NAV. Authorized participants will deliver, or facilitate the delivery of, bitcoin to the Trust's account with the Custodian in exchange for Shares when they purchase Shares, and the Trust, through the Custodian, will deliver bitcoin to such authorized participants when they redeem Shares with the Trust. Authorized participants may then offer Shares to the public at prices that depend on various factors, including the supply and demand for Shares, the value of the Trust's assets, and market conditions at the time of a transaction. Shareholders who buy or sell Shares during the day from their broker may do so at a premium or discount relative to the NAV of the Shares of the Trust.

According to the Registration Statement, on any business day, an authorized participant may place an order to create one or more baskets. Purchase orders must be placed by the time noted in the Authorized Participant Agreement or as provided separately to all Authorized Participants. The day on which an order is received is considered the purchase order date. The total deposit of bitcoin required is an amount of bitcoin that is in the same proportion to the total assets of the Trust, net of accrued expenses and other liabilities, on the date the order to purchase is properly received, as the number of Shares to be created under the purchase order is in proportion to the total number of Shares outstanding on the date the order is received. Each night, the Sponsor will publish the amount of bitcoin that will be required in exchange for each creation order. The Administrator determines the required deposit for a given day by dividing the number of bitcoin held by the Trust as of the opening of business on that business day, adjusted for the amount of bitcoin constituting estimated accrued but unpaid fees and

expenses of the Trust as of the opening of business on that business day, by the quotient of the number of Shares outstanding at the opening of business divided by the aggregation of Shares associated with a Creation Basket. The procedures by which an authorized participant can redeem one or more Creation Baskets mirror the procedures for the creation of Creation Baskets.

Standard for Approval of Proposed Rule under the Act

a. Section 6(b)(5) and the Applicable Standards

The Commission has approved numerous series of Trust Issued Receipts,[51] including Commodity-Based Trust Shares,[52] to be listed on U.S. national securities exchanges. In order for any proposed rule change from an exchange to be approved, the Commission must determine that, among other things, the proposal is consistent with the requirements of Section 6(b)(5) of the Act. This more specifically includes (i) the requirement that a national securities exchange's rules are designed to prevent fraudulent and manipulative acts and practices;[53] and (ii) the requirement that an exchange proposal

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51 See Exchange Rule 14.11(f).

52 Commodity-Based Trust Shares, as described in Exchange Rule 14.11(e)(4), are a type of Trust Issued Receipt.

53 As the Exchange has stated in a number of other public documents, it continues to believe that bitcoin is resistant to price manipulation and that "other means to prevent fraudulent and manipulative acts and practices" exist to justify dispensing with the requisite surveillance sharing agreement. The geographically diverse and continuous nature of bitcoin trading render it difficult and prohibitively costly to manipulate the price of bitcoin. The fragmentation across bitcoin platforms, the relatively slow speed of transactions, and the capital necessary to maintain a significant presence on each trading platform make manipulation of bitcoin prices through continuous trading activity challenging. To the extent that there are bitcoin exchanges engaged in or allowing wash trading or other activity intended to manipulate the price of bitcoin on other markets, such pricing does not normally impact prices on other exchange because participants will generally

be designed, in general, to protect investors and the public interest. In order to meet this standard in a proposal to list and trade a series of Commodity-Based Trust Shares, the Commission requires that an exchange demonstrate that there is a comprehensive surveillance-sharing agreement in place[54] with a regulated market of significant size. Specifically, the Commission has previously stated that:

> when the spot market is unregulated – the requirement of preventing fraudulent and manipulative acts may possibly be satisfied by showing that the ETP listing market has entered into a surveillance-sharing agreement with a regulated market of significant size in derivatives related to the underlying asset. That is because, where a market of significant size exists with respect to derivatives on the asset underlying the commodity-trust ETP, the Commission believes that there is a reasonable likelihood

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ignore markets with quotes that they deem non-executable. Moreover, the linkage between the bitcoin markets and the presence of arbitrageurs in those markets means that the manipulation of the price of bitcoin price on any single venue would require manipulation of the global bitcoin price in order to be effective. Arbitrageurs must have funds distributed across multiple trading platforms in order to take advantage of temporary price dislocations, thereby making it unlikely that there will be strong concentration of funds on any particular bitcoin exchange or OTC platform. As a result, the potential for manipulation on a trading platform would require overcoming the liquidity supply of such arbitrageurs who are effectively eliminating any cross-market pricing differences.

54 As previously articulated by the Commission, "The standard requires such surveillance sharing agreements since "they provide a necessary deterrent to manipulation because they facilitate the availability of information needed to fully investigate a manipulation if it were to occur." The Commission has emphasized that it is essential for an exchange listing a derivative securities product to enter into a surveillance- sharing agreement with markets trading underlying securities for the listing exchange to have the ability to obtain information necessary to detect, investigate, and deter fraud and market manipulation, as well as violations of exchange rules and applicable federal securities laws and rules. The hallmarks of a surveillance-sharing agreement are that the agreement provides for the sharing of information about market trading activity, clearing activity, and customer identity; that the parties to the agreement have reasonable ability to obtain access to and produce requested information; and that no existing rules, laws, or practices would impede one party to the agreement from obtaining this information from, or producing it to, the other party." The Commission has historically held that joint membership in ISG constitutes such a surveillance sharing agreement. See Wilshire Phoenix Disapproval.

> that a person attempting to manipulate the ETP by manipulating the underlying spot market would also have to trade in the derivatives market in order to succeed, since arbitrage between the derivative and spot markets would tend to counter an attempt to manipulate the spot market alone. [55]

The Commission has provided illustrative guidance in interpreting the terms "significant market" and "market of significant size" to include "a market (or group of markets) as to which (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 a surveillance-sharing agreement would assist the ETP listing market 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."[56]

The Commission has stated in a prior disapproval order that "the lead-lag relationship between the bitcoin futures market and the spot market…is central to understanding whether it is reasonably likely that a would-be manipulator of the ETP would need to trade on the bitcoin futures market to successfully manipulate prices on those spot platforms that feed into the proposed ETP's pricing mechanism."[57] The Commission further noted that "in particular, if the spot market leads the futures market, this would indicate that it would not be necessary to trade on the futures market to

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55 See Winklevoss Order at 37579 and 37600.

56 Id.

57 See Securities Exchange Act Release No. 87267 (October 9, 2019) 84 FR 55382 (October 16, 2019) (SR-NYSEArca-2019-01) at 55411 (Order Disapproving a Proposed Rule Change, as Modified by Amendment No. 1, Relating to the Listing and Trading of Shares of the Bitwise Bitcoin ETF Trust Under NYSE Arca Rule 8.201-E).

manipulate the proposed ETP, even if arbitrage worked efficiently, because the futures price would move to meet the spot price."[58]

The Exchange and Sponsor both believe that this proposal is consistent with the requirements of Section 6(b)(5) of the Act and that the Sponsor's analysis demonstrates that the Exchange can meet such requirements in that the CME Bitcoin Futures Market (i) is a regulated market; (ii) has a comprehensive surveillance-sharing agreement with the Exchange; and (iii) satisfies the Commission's "significant market" definition."

b. The CME Bitcoin Futures Market is a Regulated Market and ISG Member

The CME is regulated by the CFTC and is a member of the Intermarket Surveillance Group ("ISG"), which was established to provide a framework for sharing information and coordinating regulatory efforts among exchanges trading securities and related products and to address potential intermarket manipulations and trading abuses. The Commission has previously stated that membership by a regulated futures exchange in ISG is sufficient to meet the surveillance-sharing requirement.[59] Both the Exchange and CME are members of the ISG.

c. The CME Bitcoin Futures Market is a Market of Significant Size

Based on the Commission's prior guidance, Sponsor conducted a detailed price discovery study through its lead-lag analysis of bitcoin spot and futures trading across markets located globally. As discussed below, Sponsor's analysis concludes that the

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58 Id.

59 See Winklevoss Order at 37594.

CME Bitcoin Futures market is consistently the leading market for price discovery across USD bitcoin markets located globally, including bitcoin spot markets and offshore, unregulated bitcoin futures markets. Thus, Sponsor's analysis supports the conclusion that there is a reasonable likelihood that a person attempting to manipulate the Shares would also have to trade on the CME Bitcoin Futures market to manipulate the Trust. Sponsor also conducted an additional lead lag analysis including data from a recently launched CME Bitcoin Futures-based ETF to evaluate the likelihood of whether trading in the Trust could become the predominant influence on prices in the CME Bitcoin Futures market and concluded that it is unlikely that trading in the Trust would be the predominant influence on prices in the CME Bitcoin Futures market.

Sponsor's methodology for analyzing price discovery in the Bitcoin spot and futures markets is described below.

Research Design

Price discovery between spot and futures markets plays an important role in financial research due to its association with market maturity. In theory, the futures market is expected to lead price discovery in established asset classes due to its inherent features, such as lower transaction fees, built-in leverage, unconstrained short-selling, and greater transparency.

Since CME Bitcoin Futures contracts began trading on regulated exchanges in December 2017, several academic and market research papers have studied spot-futures price discovery in bitcoin markets. Sponsor has reviewed these papers and summarizes them below in Table 1. The conclusions from these papers are mixed as to which markets lead or lag in price discovery. Sponsor noted that each of the studies reviewed

used metrics derived from the Vector Error Correction Model (VECM) or an extension of VECM to examine price discovery. These metrics, such as the Information Share (IS)[60], and the Component Share (CS)[61], provide great insights into understanding pricing dynamics, but face difficulties based on model assumptions of VECM when the prices under consideration are non-synchronous and/or infrequent. Buccheri (2021)[62] discussed the limitations for VECM derived metrics and noted that when price observations are sparse, a lot of zero returns are produced through imputation; therefore, the time series of prices strongly deviate from the standard semi-martingale assumption and sample covariances can be downward biased. The authors in Buccheri (2021) conclude that when the prices have a high level of sparsity, the VECM is clearly mis-specified and the

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60 Hasbrouck, Joel. "One security, many markets: Determining the contributions to price discovery." *The journal of Finance* 50, no. 4 (1995): 1175-1199. https://doi.org/10.2307/2329348. This study proposed the information share metric and employed a VECM to measure the contribution of a price series to price discovery. The study provides great insights on the response of one market to innovations in a common level but has limitations when used with non-synchronous and/or infrequent input data based on the assumptions of the VECM.

61 Gonzalo, Jesus, and Clive Granger. "Estimation of common long-memory components in cointegrated systems." *Journal of Business & Economic Statistics* 13, no. 1 (1995): 27-35. https://doi.org/10.2307/1392518. This study proposes a method of decomposing the price variables into a permanent component and a transitory component using the VECM. One of the most popular metrics in price discovery research, CS, was created on the foundation of this work. It provides great insights into markets' responses to transitory frictions but has limitations when used with non-synchronous and/or infrequent input data based on the assumptions of the VECM.

62 Buccheri, Giuseppe, Giacomo Bormetti, Fulvio Corsi, and Fabrizio Lillo. "Comment on: Price discovery in high resolution." *Journal of Financial Econometrics* 19, no. 3 (2021): 439-451. https://doi.org/10.1093/jjfinec/nbz008. The authors comment on the limitations of using information share within markets with trades on high resolution frequencies. The paper illustrates why the application of a VECM methodology like information share would be mis-specified and the OLS estimates could be biased because of high sparsity in the data.

estimates are potentially biased. This conclusion in Buccheri (2021) confirms Sponsor's observation that IS is sensitive to the level of sparsity within CME Bitcoin Futures data and explains why prior research conclusions are mixed on whether the CME Bitcoin Futures market leads or bitcoin spot market leads. Due to the high sparsity of CME Bitcoin Futures data, the Sponsor attributes the "mixed results" in previous academic studies that have failed to demonstrate that the CME Bitcoin Futures market constitutes a market of significant size to the problems associated with VECM and imputation. The Sponsor's analysis accounts for the characteristics of CME's trading data by applying the Hayashi-Yoshida (HY) estimator within a lead-lag framework.

Table 1: Previous bitcoin spot/futures price discovery research

Author	Article Name (Year)	Journal	Metrics	Data Range	Frequency Level	Conclusion
Corbet, et al.	Bitcoin Futures - What use are they? (2018)	Economics Letters	Information Share, Component Share, Information Leadership Share (Yan) Information Leadership Share (Putnins)	09/26/2017 - 02/22/2018	Minute	finding that the bitcoin spot market leads price discovery
Kapar and Olmo	An analysis of price discovery between Bitcoin futures and spot markets (2018)	Economics Letters	Information Share, Component Share	12/12/2017 - 05/16/2018	Daily	finding that the bitcoin futures market leads price discovery
Baur and Dimpfl	Price Discovery in Bitcoin Spot or Futures? (2019)	Journal of Futures Markets	Information Share, Component Share	12/10/2017 - 10/18/2018	15-Minute	finding that the bitcoin spot market leads price discovery
Hu, et al.	What role do futures markets play in Bitcoin pricing? Causality, cointegration and price discovery from a time-varying perspective (2019)	International Review of Financial Analysis	Time-varying version of Information Share and Generalized information Share	12/18/2017 - 06/16/2019	Daily	finding that the bitcoin futures market leads price discovery
Alexander and Heck	Price discovery, high-frequency trading and jumps in bitcoin markets (2019)	Available at SSRN: https://ssrn.com/abstract=3383147	Generalized Information Share, Component Share	12/18/2017 - 06/30/2019	30-Minute	finding that the bitcoin futures market leads price discovery
Fassas, et al.	Price Discovery in Bitcoin Futures (2020)	Research in International Business and Finance	Common Factor Weight, Information Share, Component Share, Information Leadership Share (Putnins)	01/01/2018 - 12/31/2018	Hourly	finding that bitcoin futures play a more important role in price discovery
Entrop, et al.	The determinants of price discovery	Journal of Futures Markets	Information Share,	12/17/2017 - 03/31/2019	Minute	finding that price discovery measures vary significantly over time

	on bitcoin markets (2020)		Component Share			without one market being clearly dominant over the other
Akyildirim, et al.	The development of Bitcoin futures: Exploring the interactions between cryptocurrency derivatives (2020)	Finance Research Letters	Information Share, Component Share, Information Leadership Share (Yan) Information Leadership Share (Putnins)	12/18/2017 - 02/26/2018	Minute	finding that futures dominate price discovery relative to spot market, and CBOE futures are found to be the lead source compared to CME
Alexander, et al.	Price Discovery in Bitcoin: The Impact of Unregulated Markets (2020)	Journal of Financial Stability	Generalized Information Share	04/01/2019 - 01/30/2020	Minute	finding that, in a multi-dimensional setting, including the main price leaders within futures, perpetuals, and spot markets, CME bitcoin futures have a very minor effect on price discovery and that faster speed of adjustment and information absorption occurs on the unregulated spot and derivatives platforms than on CME bitcoin futures
Aleti and Mizrach	Bitcoin spot and futures market microstructure (2020)	Journal of Futures Markets	Information Share, Component Share	01/02/2019 - 02/28/2019	5-Minute	finding that relatively more price discovery occurs on CME as compared to four spot exchanges
Chang, et al.	Efficient price discovery in the bitcoin markets (2020)	Available at SSRN: https://ssrn.com/abstract=3733924	Component Share	07/01/2019 - 12/31/2019	Minute	finding that CME bitcoin futures dominate price discovery
Hung, et al.	Trading activity and price discovery in Bitcoin futures markets (2021)	Journal of Empirical Finance	Modified Information Share	12/26/2017 - 04/30/2019	15-Minute	finding that the bitcoin spot market dominates price discovery
Wu, et al.	Fractional cointegration in bitcoin spot and futures markets (2021)	Journal of Futures Markets	Fractional Version of Component Share	12/18/2017 - 7/31/2020	Minute	finding that CME bitcoin futures dominate price discovery

The Sponsor believes the framework of correlation-based lead-lag analysis using the Hayashi-Yoshida (HY) estimator[63] to compute correlation and its extension by other

63 Hayashi, Takaki, and Nakahiro Yoshida. "On covariance estimation of non-synchronously observed diffusion processes." *Bernoulli* 11, no. 2 (2005): 359-379. http://www.jstor.org/stable/3318933. The authors proposed a novel method (HY estimator) of estimating the covariance of two diffusion processes when they are observed only at discrete times in a non-synchronous manner. This methodology addresses the issue that the traditional realized covariance estimator encounters, which is that the choice of regular interval size and data interpolation

academic researchers, including Hoffman (2013)[64], to obtain the lead-lag information is more suitable. This approach is free from any imputation or sampling for non-synchronous and/or infrequent data and has proven useful in price discovery research in other markets. Huth (2011)[65] studied high-frequency lead-lag relationships in the French equity market using the Hayashi-Yoshida estimator and proposed a measurement, lead-lag ratio, for calculating the relative strength of the lead-lag relationships. Sponsor applied this lead-lag ratio in its analysis of the global bitcoin spot and futures markets. Dao (2018)[66] applied the Hayashi-Yoshida estimator in a lead-lag framework on the S&P 500 index and the two most liquid ETFs that track it. This academic study is the first to analyze the effect of information arrival on the lead-lag relationship among related spot instruments and concludes that sophisticated investors have a more significant effect on the lead-lag relationship. The analysis from this study confirms that using the Hayashi-Yoshida estimator in a lead-lag framework is suitable for analyzing non-synchronous

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scheme can lead to unreliable estimation. The new method Hayashi and Yoshida introduced in this paper is free from any interpolation and therefore avoids the bias and other problems caused by it.

[64] Hoffmann, Marc, Mathieu Rosenbaum, and Nakahiro Yoshida. "Estimation of the lead-lag parameter from non-synchronous data." *Bernoulli* 19, no. 2 (2013): 426-461. http://www.jstor.org/stable/23525731. The authors propose a methodology for modeling the lead-lag effect between two financial assets with non-synchronous data based on Hayashi and Yoshida's work (2015). It has been applied in various price discovery research publications. The Sponsor's analysis utilized this methodology to obtain pairwise lead-lag seconds between two markets.

[65] Huth, Nicolas, and Frédéric Abergel. "High frequency lead/lag relationships—empirical facts." *Journal of Empirical Finance* 26 (2014): 41-58. https://doi.org/10.1016/j.jempfin.2014.01.003.

[66] Dao, Thong Minh, Frank McGroarty, and Andrew Urquhart. "Ultra-high-frequency lead–lag relationship and information arrival." *Quantitative Finance* 18, no. 5 (2018): 725-735. https://doi.org/10.1080/14697688.2017.1414484.

tick-level data. Sponsor notes that there is academic research studying high-frequency lead-lag relationships between multiple bitcoin spot markets with Hayashi-Yoshida estimator and analyze how information arrival affects these relationships from *Schei (2019)*[67]. Sponsor's analysis expands this research by using the Hayashi-Yoshida estimator with a lead-lag framework on bitcoin spot and futures markets and explains why this methodology is more suitable based on the characteristics of CME Bitcoin Futures market data. Sponsor's study focused on exploring the information flow using the HY estimator not only within bitcoin spot markets, but also including bitcoin futures markets globally.

Data Description and Sources

Sponsor obtained tick level trade data for Bitcoin spot prices and futures prices used in its analysis from Coin Metrics for the period spanning from January 1, 2019 to March 31, 2021. Table 2 summarizes the dataset by exchange, market type, and quote currency. Due to the size of the dataset, Sponsor aggregated the tick level trades to the one second floor level using a volume weighted average price (VWAP) approach. Using the smallest sampling frequency possible and allowing the data to stay non-synchronous is important to this study. Compared to the daily/minute frequency, the second level data can capture more intra-day price dynamics and the HY estimator with lead-lag framework can be utilized without artificial interpolation or synchronous resampling.

In order to exclude any impacts caused by exchange rate movements, Sponsor limited the dataset to BTC-USD and BTC-USDT trades. Markets with an average

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67 Schei, Norheim Schei. "High Frequency Lead-Lag Relationships in the Bitcoin Market." (unpublished master's thesis, 2019). Copenhagen Business School, Copenhagen, Denmark.

correlation lower than 0.1 to other bitcoin markets, in any given quarter, were removed from the analysis. For futures markets, Sponsor included both ordinary futures and perpetuals. Contract frequencies were validated and recorded via respective exchange websites and, for CME data, the sponsor compared data from the exchange directly with data provided by Coin Metrics to verify accuracy.

Within the ordinary futures market, one exchange, quote and contract lifespan combination can often have same-day trading on contracts with different expiration dates. To remove price gaps in this market, Sponsor constructed a continuous time-series of prices by choosing the contract with the highest volume per day within an exchange, quote, and contract lifespan combination. For each combination, successive contracts are backwards adjusted using the price difference between the two contracts at the time of rollover.

Table 2 Summary of Instruments

	Spot		Ordinary Futures[68]		Perpetual Futures	
Exchange	**USD**	**USDT**	**USD**	**USDT**	**USD**	**USDT**
Binance		✓	✓	✓	✓	✓
Binance.US	✓					
Bitfinex	✓	✓				✓
bitFlyer	✓					
BitMEX			✓		✓	
Bitstamp	✓					
Bittrex	✓					
Bybit					✓	✓
CEX.IO	✓					
CME			✓			
Coinbase	✓					
Deribit			✓		✓	
FTX	✓		✓		✓	
Gemini	✓					
HitBTC		✓				
Huobi		✓	✓		✓	✓
itBit	✓					
Kraken	✓	✓	✓		✓	
LBank		✓				
Liquid	✓					
OKEx		✓	✓	✓	✓	✓
ZB.COM		✓				

Legend: **CME Bitcoin Futures** | **USD Spot** | **USDT Spot** | **USD Futures** *(Excluding CME)* | **USDT Futures** | **USD Perpetual Futures** | **USDT Perpetual Futures**

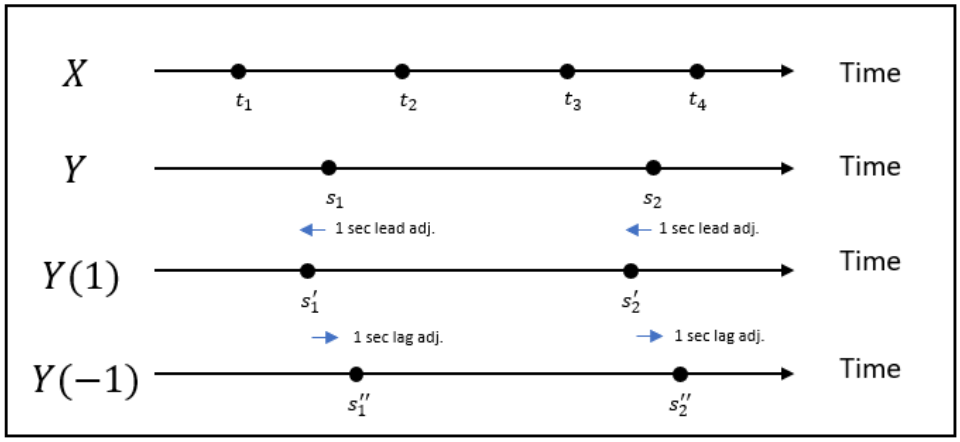
In the lead-lag analysis, Sponsor examined the pairwise lead-lag relationship within the spot market and futures market, as well as across them. For each pair, Sponsor computed the correlation coefficients using the HY estimator between one market price time series and a second market price time series as well as timestamp-adjusted (leading/lagging) versions of the second market to find the time delta that maximizes their correlation. The range of time deltas is from – N seconds to N seconds in one

68 One exchange with the same market type and quote currency can have multiple ordinary futures contracts with different expiration cycles/lifespans.

second increments. In the Sponsor's analysis, the parameter N is set as 15. For illustration below, Sponsor uses the pair of CME USD Futures (denoted as price time series X) and Coinbase USD Spot (denoted as price time series Y) as an example to describe the process.

Step 1: Fix the timestamp of CME and adjust the timestamps of Coinbase from N seconds lagging to N seconds leading. Figure 1 shows this process with time deltas equal to 1 and -1 for illustration purpose.

Figure 1: Adjustment of Timestamps



Notes: Each dot is a price observation; t_i and s_j are the observation timestamps of X and Y; $Y(1)$ and $Y(-1)$ are timestamp adjusted price time series with 1 second backward shift and 1 second forward shift respectively.

Step 2: Compute the correlation coefficients between CME price time series and each of timestamp-adjusted time series of Coinbase with l seconds ($l \in [-N, N]$) lead/lag using HY estimator. The correlation coefficient is defined as (Hayashi & Yoshida 2005):

$$\hat{\rho} = \frac{\sum_{i,j} r_X^i r_Y^j \mathbb{I}_{\{O_{ij} \neq \emptyset\}}}{\sqrt{\sum_i (r_X^i)^2 \sum_j (r_Y^j)^2}},$$

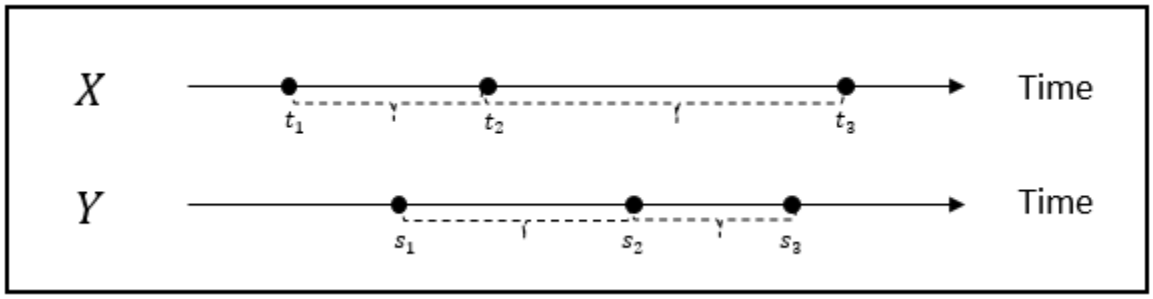
where

- X and Y are trade prices on two different markets
- $r_X^i = X_{t_i} - X_{t_{i-1}}$ and t_i is the i_{th} observed time of X

- $r_Y^j = Y_{s_j} - Y_{s_{j-1}}$ and s_j is the j_{th} observed time of Y
- The observed times, t_i and s_j for X and Y are independent
- O_{ij} is the overlapping time between interval (t_{i-1}, t_i) and interval (s_{i-1}, s_i)
- $\mathbb{I}$ is defined as an indicator function, $\mathbb{I} = \begin{cases} 1, & O_{ij} \neq \emptyset \\ 0, & O_{ij} = \emptyset \end{cases}$.

The numerator of $\hat{\rho}$ is the covariance between CME and Coinbase, which equates to the sum pf every product of price changes that share a time overlap. Figure 2 shows this process with a simple example.

Figure 2: Data Points Used in HY Estimator



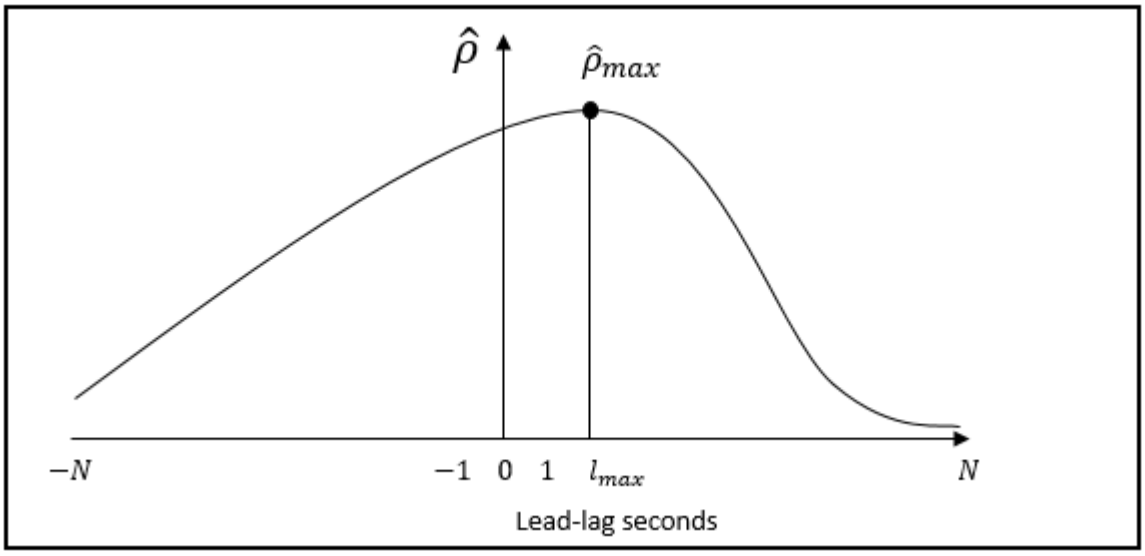
Notes: The interval (t_1, t_2) is overlapped with the interval (s_1, s_2), and the interval (t_2, t_3) is overlapped with both of the interval (s_1, s_2) and the interval (s_2, s_3). Therefore, the covariance is calculated by summing the products of the following pairs of price changes: $(X_{t_2} - X_{t_1}, Y_{s_2} - Y_{s_1})$, $(X_{t_3} - X_{t_2}, Y_{s_2} - Y_{s_1})$, and $(X_{t_3} - X_{t_2}, Y_{s_3} - Y_{s_2})$.

Step 3: Collect the correlation coefficients with different lead-lag seconds as a correlation curve and search for the value l_{max} from $-N$ to N that maximizes their correlation. Meanwhile, compute the lead-lag ratio between CME and Coinbase, llr, to measure the strength of the lead-lag relationship (Huth & Abergel 2012). It is defined as

$$llr = \frac{\sum_{i=1}^{N} \hat{\rho}^2(l_i)}{\sum_{i=1}^{N} \hat{\rho}^2(-l_i)}.$$

If $llr \in [0.95, 1.05]$ or l_{max} is zero, we conclude neither market leads. If llr is not in the range $[0.95, 1.05]$ and l_{max} is positive, CME leads Coinbase by l_{max} seconds and vice versa. Figure 3 shows an example of the correlation curve.

Figure 3: Example of the Correlation Curve



Notes: The l_{max} is the lead-lag seconds, and $\hat{\rho}_{max}$ is the corresponding maximum HY correlation.

These three steps provide the pairwise lead-lag seconds between two markets. To measure a market's overall price discovery leadership, the results are aggregated by taking the average lead-lag seconds it has with all other markets included in a quarter.

d. Conclusion of Reasonable Likelihood – Lead Lag Analysis

The Sponsor's results suggest that, out of the 20 spot markets and 26 futures markets analyzed, the CME Bitcoin Futures market plays the most important role in price discovery during each quarter spanning from the first quarter of 2019 to the first quarter of 2021. The respective empirical results are reported in Figure 4 and show that, while other category leaders can change rank each quarter, they consistently rank below CME futures in average seconds leading. This consistency, along with the Sponsor's inclusion standards of strict overall average market correlations and demonstrative lead-lag ratios,

speaks to the strength of CME futures' leadership across spot and futures markets globally. [69]

[69] For more information, see Memorandum from the Division of Trading and Markets regarding a September 8, 2021 meeting with representatives from Fidelity Digital Assets, et al. (Sept. 8, 2021) *available at* https://www.sec.gov/comments/sr-cboebzx-2021-039/srcboebzx2021039-250110.pdf.

Figure 4: Leading Market Category – Based on the Leading Market within each Category

Leading Exchange Category - Based on the Leading Exchange within the

Leading Category	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021
	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures	CME Bitcoin Futures
1st Lagging Category	USD Spot	USD Spot	USD Perpetual Futures	USD Spot	USD Futures	USD Futures	USD Spot	USD Futures	USD Futures
2nd Lagging Category	USDT Spot	USD Perpetual Futures	USD Spot	USDT Spot	USD Spot	USD Spot	USD Futures	USD Spot	USDT Futures
3rd Lagging Category	USD Perpetual Futures	USDT Spot	USDT Spot	USD Futures	USD Perpetual Futures	USDT Perpetual Futures	USDT Perpetual Futures	USD Perpetual Futures	USD Perpetual Futures
4th Lagging Category	USD Futures	USD Futures	USD Futures	USD Perpetual Futures	USDT Spot	USDT Spot	USDT Spot	USDT Perpetual Futures	USDT Perpetual Futures
5th Lagging Category	N/A	N/A	N/A	USDT Perpetual Futures	USDT Perpetual Futures	USD Perpetual Futures	USDT Futures	USDT Spot	USDT Spot
6th Lagging Category	N/A	N/A	N/A	N/A	N/A	USDT Futures	USD Perpetual Futures	USDT Futures	USD Spot

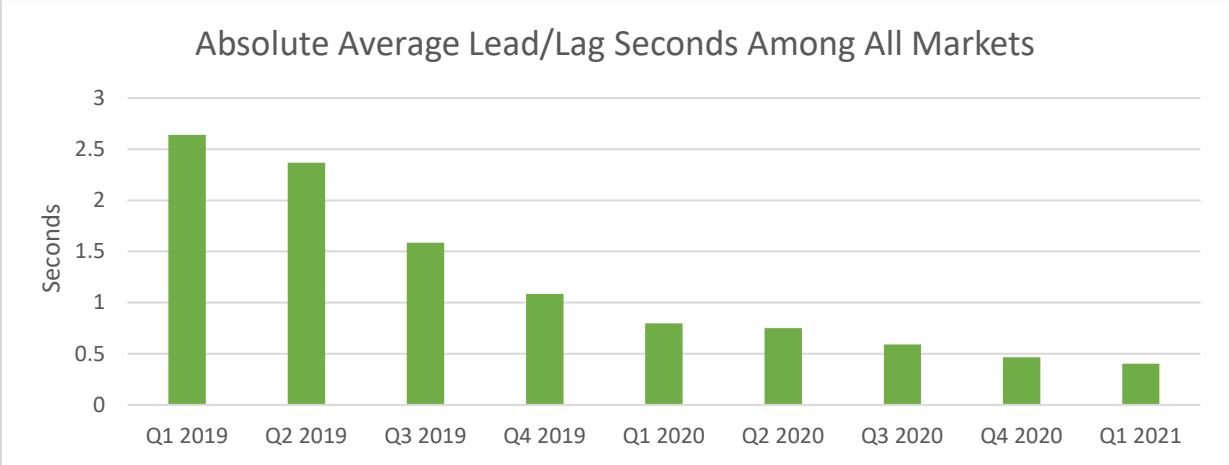
Legend: CME Bitcoin Futures; USD Spot; USDT Spot; USD Futures *(Excluding CME)*; USDT Futures; USD Perpetual Futures; USDT Perpetual Futures

The lead-lag relationships between and among bitcoin futures and spot markets provide insights into the directional influences of markets on price discovery, with the CME Bitcoin Futures market playing the most important role in price discovery during each quarter spanning from the first quarter of 2019 to the first quarter of 2021, as noted above. Arbitrage between the CME Bitcoin Futures market and spot markets would tend to counter an attempt to manipulate the spot market alone. Thus, the Sponsor's analysis supports the conclusion that there is a reasonable likelihood that a person attempting to manipulate the Shares would also have to trade on the CME Bitcoin Futures market to manipulate the ETP.

Figure 5 shows that the absolute average of every market's overall lead-lag seconds (average lead-lag seconds over all other markets) has steadily decreased from the first quarter of 2019 to the first quarter of 2021. This suggests that the efficiency within

bitcoin markets has continued to improve and the window of arbitrage opportunity has closed with increasing speed.

Figure 5: Absolute Average Lead/Lag Seconds Among All Markets



Although overall market efficiency has continued to improve, the strength of CME Bitcoin Futures leadership has not deteriorated. This can be measured by observing the ratio of CME Bitcoin Futures' average lead among all markets over the absolute average of every market's overall lead-lag seconds as seen in figure 6.

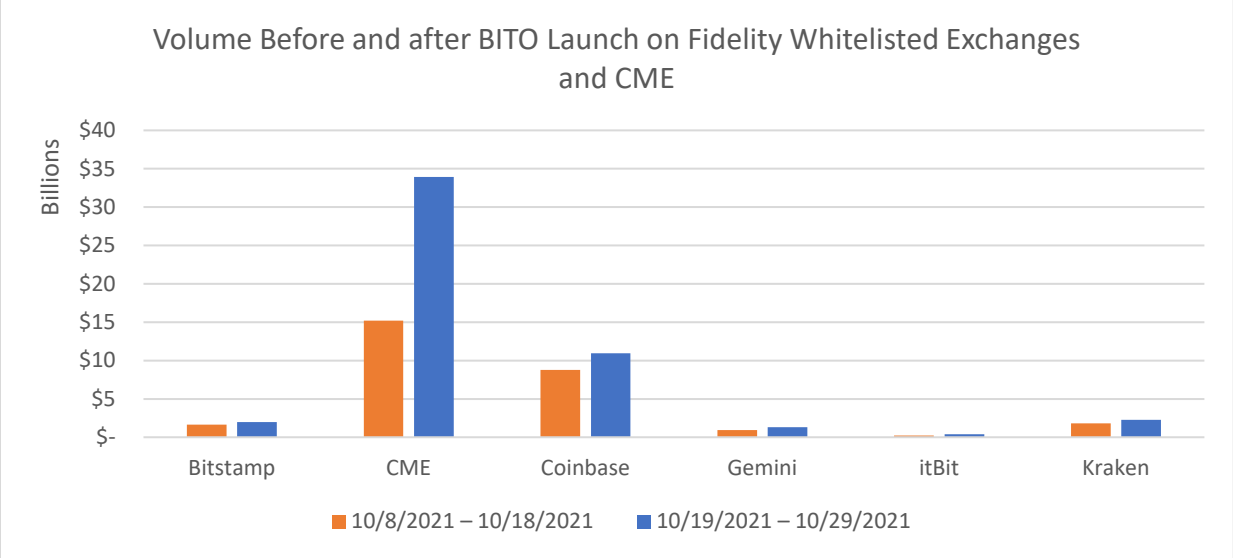
Figure 6: Strength of CME Leadership Relative to All Markets' Average Lead/Lag

e. *Conclusion of Unlikelihood for Trust to be Predominant Influence on Prices in CME Bitcoin Futures Market*

As described above, the Commission requires the Exchange to establish that it is unlikely that trading in the Shares would become the predominant influence on prices in the CME Bitcoin Futures market. In considering this question, Sponsor conducted a lead-lag analysis to evaluate the effect of a new market (specifically an ETP) entering with high trade activity. Sponsor used trade data from a recently launched CME Bitcoin Futures-based ETF in its analysis. Sponsor selected the ProShares Bitcoin Strategy ETF ("BITO") for its analysis as BITO is a Commission-registered ETF that is listed and traded on a US regulated national securities exchange and was launched on October 18, 2021. As described in its prospectus, BITO seeks to invest primarily in CME Bitcoin Futures contracts. Sponsor's analysis concluded that trading in the proposed ETP would not be the predominant influence on prices in the CME Bitcoin Futures market.

Sponsor obtained tick level data from Coin Metrics for all markets included in the lead-lag analysis described above spanning two specific periods: 11 days before the launch of BITO (10/8/2021 – 10/18/2021) and 11 days after the launch (10/19/2021 – 10/29/2021). For the 11 days after the launch of BITO, Sponsor obtained tick-level trade data on BITO via Bloomberg and aggregated to the one second floor level using the same method described above. Sponsor selected these two periods to represent a period of new information and heightened trading activity in the CME Bitcoin Futures market as seen from Figure 7.

Figure 7: Volume Comparison Before and After BITO Launch on Fidelity Whitelisted Exchanges and CME

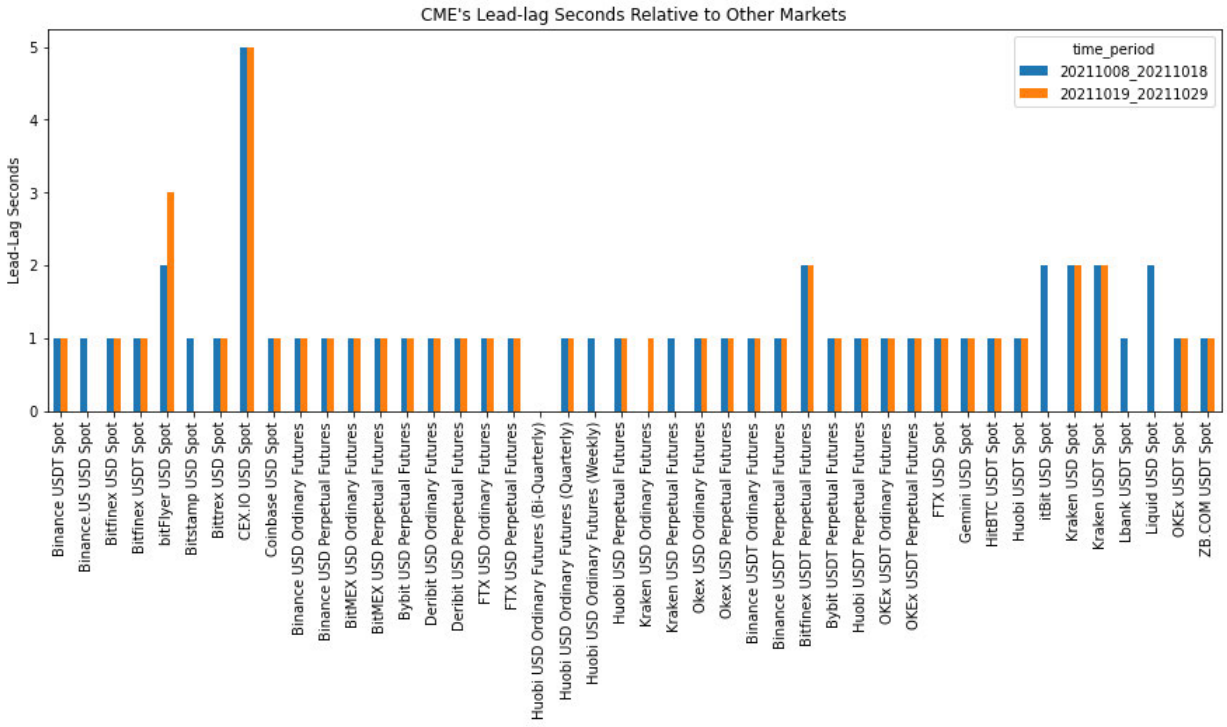


Sponsor examined the pairwise lead-lag relationship between CME Bitcoin Futures and all other markets included. For each pair, Sponsor computed the correlation coefficients using the same lead-lag framework and HY estimator between CME Bitcoin Futures and the second market price time series as well as timestamp-adjusted (leading/lagging) versions of the second market to find the time delta that maximized their correlation. The only differences between Sponsor's shortened analysis and the quarterly analysis spanning Q1 2019 through Q1 2021 are the timeframes and a stricter average correlation threshold (.2 instead of .1) in the former analysis given the shorter timeframe.

The results of this analysis in Figure 8 show the CME Bitcoin Futures market leading all markets for the period of 11 days prior to the launch of BITO. This price discovery leadership overall does not become stronger or weaker after BITO's launch in

the period of 10/19/2021 to 10/29/2021 even though the trading volume was increased significantly.[70]

Figure 8: CME's Lead-lag Seconds Relative to Other Market Before and After BITO's Launch



Given that the CME Bitcoin Futures market did not see an increase in price discovery leadership during a period of heightened activity on that market, Sponsor believes it would be unreasonable to assume that that level of leadership would deteriorate due to heightened trade activity in the spot market.

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70 Futures with much smaller trading volumes compared to the underlying spot market can still dominate price discovery. See Hauptfleisch, Martin, Tālis J. Putniņš, and Brian Lucey. "Who sets the price of gold? London or New York." *Journal of Futures Markets* 36, no. 6 (2016): 564-586. https://doi.org/10.1002/fut.21775 for more information.

Sponsor also believes that there will be no material effect of the Shares' trade prices on CME Bitcoin Futures prices. To estimate this effect, using BITO is the first ETP launched in US, it is reasonable to consider it as a general ETP example. Sponsor examined the pairwise lead-lag relationship between BITO and all other markets included in previous analysis. As seen in Table 2, only four markets have a lead-lag ratio (the strength measurement of the lead-lag relationship) outside the range of $[0.95, 1.05]$ and non-zero lead-lag seconds to conclude they are leading or lagging. Sponsor interprets this result as BITO's lead-lag relationship with other bitcoin markets is not significant. Regarding BITO's price discovery contribution measured by lead-lag seconds, it does not lead any bitcoin markets except CEX.IO USD spot market, which not only lags BITO but also lags all other bitcoin markets.

Table 2: Markets with significant lead/lag relationships to BITO

	BITO Leadership (Lead-lag Seconds)	Lead-Lag Ratio
CME USD Ordinary Futures	-1	0.909
Kraken USD Ordinary Futures	-1	0.926
Huobi USD Ordinary Futures (Bi-Quarterly)	-1	0.933
CEX.IO USD Spot	12	1.067

From the results of this analysis, Sponsor believes that BITO as a general bitcoin ETP example only has a minor impact to price discovery in the bitcoin markets.

The gold market shares certain characteristics with the bitcoin market – both gold and bitcoin have a finite supply, are traded globally in various market venues against

various currency pairs and have a robust futures market. In addition, many investors view bitcoin as a form of digital gold and in looking to determine the potential impact of price discovery in trading in the ETP shares on the secondary market, the Sponsor looks to the gold market as an analogous market to bitcoin when looking to determine the impact of price discovery. According to a previous study[71] the Sponsor reviewed, the authors analyzed intraday data on gold prices from 1997-2014 and concluded that futures markets tend to lead price discovery in the gold market despite the spot market having ten times more volume than the US futures market. A second study[72] that the sponsor analyzed, came to the same conclusion that futures are the global leader in price discovery for gold, with a growing influence of ETPs.

Further, Sponsor believes that Shares of the Trust trading on the secondary market could have a positive impact on the CME Bitcoin Futures market leading position. Sponsor believes this due to the use of CME Bitcoin Futures in hedging activities by market participants. One such example, is when Authorized Participants transact on both the secondary and primary markets. In order to arbitrage or fulfill large basket trades on behalf of clients, Authorized Participants may transact in the primary market with the ETP by creating and/or redeeming and then immediately offsetting that transaction in the secondary market. Because the primary market is settled in-kind (meaning the exchange of shares and bitcoin) and the secondary market is settled in cash (meaning the exchange

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71 See Hauptfleisch, et. al.

72 Sehgal, Sanjay, Neharika Sobti, and Florent Diesting. "Who leads in intraday gold price discovery and volatility connectedness: Spot, futures, or exchange-traded fund?" *Journal of Futures Markets* 41, no. 7 (2021): 1092-1123. https://doi.org/10.1002/fut.22208.

of shares and fiat currency), the Authorized Participant needs to transact in the bitcoin spot market. Given there is a lag between the secondary market transaction, the striking of the NAV per Share in the primary market and the settlement of the primary market transaction, the Authorized Participants will look to hedge their exposure to the bitcoin market through the use of bitcoin futures. For the reasons discussed throughout this document such as the transparency, low fees, and leverage capabilities, many market participants look to hedge themselves using futures and Sponsor believes that will be the case with Authorized Participant transactions in respect of the Trust as well.

The Exchange also believes that trading in the Shares would not be the predominant force on prices in the bitcoin futures market (or spot market) for a number of additional reasons, including the significant volume in the bitcoin futures market, the size of bitcoin's market cap (approximately $1 trillion), and the significant liquidity available in the spot market. According to the Sponsor's analysis, in the second quarter of 2021, bitcoin futures volume greatly exceeded volumes in the spot markets. The volume of the bitcoin futures market was approximately $7.1 trillion where the volume of the bitcoin spot markets was approximately $1.4 trillion.[73] In addition to the bitcoin futures market data points cited above, the spot market for bitcoin is also very liquid. According to data from CoinRoutes from February 2021, the cost to buy or sell $5 million worth of bitcoin averages roughly 10 basis points with a market impact of 30

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73 For more information, see Memorandum from the Division of Trading and Markets regarding a September 8, 2021 meeting with representatives from Fidelity Digital Assets, et al. (Sept. 8, 2021) *available at* https://www.sec.gov/comments/sr-cboebzx-2021-039/srcboebzx2021039-250110.pdf.

basis points.[74] For a $10 million market order, the cost to buy or sell is roughly 20 basis points with a market impact of 50 basis points. Stated another way, a market participant could enter a market buy or sell order for $10 million of bitcoin and only move the market 0.5%. More strategic purchases or sales (such as using limit orders and executing through OTC bitcoin trade desks) would likely have less obvious impact on the market—which is consistent with MicroStrategy, Tesla, and Square being able to collectively purchase billions of dollars in bitcoin. As such, the combination of CME Bitcoin Futures leading price discovery, the overall size of the bitcoin market, and the ability for market participants, including authorized participants creating and redeeming with the Trust, to buy or sell large amounts of bitcoin without significant market impact will help prevent the Shares from becoming the predominant force on pricing in either the bitcoin spot or CME Bitcoin Futures markets, satisfying part (b) of the test outlined above.

e. Other Means to Prevent Fraudulent and Manipulative Acts and Practices

The Commission has also recognized that the "regulated market of significant size" standard is not the only means for satisfying Section 6(b)(5) of the act, specifically providing that a listing exchange could demonstrate that "other means to prevent fraudulent and manipulative acts and practices" are sufficient to justify dispensing with the requisite surveillance-sharing agreement.[75]

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74 These statistics are based on samples of bitcoin liquidity in USD (excluding stablecoins or Euro liquidity) based on executable quotes on Coinbase Pro, Gemini, Bitstamp, Kraken, LMAX Exchange, BinanceUS, and OKCoin during February 2021.

75 See Winklevoss Order at 37580. The Commission has also specifically noted that it "is not applying a "cannot be manipulated" standard; instead, the Commission

The Exchange believes that such conditions are present. Specifically, the significant liquidity in the spot market and the impact of market orders on the overall price of bitcoin mean that attempting to move the price of bitcoin is costly and has grown more expensive over the past year. In January 2020, for example, the cost to buy or sell $5 million worth of bitcoin averaged roughly 30 basis points (compared to 10 basis points in 2/2021) with a market impact of 50 basis points (compared to 30 basis points in 2/2021).[76] For a $10 million market order, the cost to buy or sell was roughly 50 basis points (compared to 20 basis points in 2/2021) with a market impact of 80 basis points (compared to 50 basis points in 2/2021). As the liquidity in the bitcoin spot market increases, it follows that the impact of $5 million and $10 million orders will continue to decrease the overall impact in spot price.

Recently, the Commission allowed three ETFs primarily invested in CME Bitcoin Futures to register and list on a national securities exchange ("Bitcoin Futures ETFs").[77] As described in its prospectus, BITO does not invest directly in bitcoin but rather seeks to provide capital appreciation primarily through managed exposure to cash-settled CME Bitcoin Futures contracts traded on commodity exchanges registered with the CFTC. Currently, the only such contracts are CME Bitcoin Futures. CME Bitcoin Futures are

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is examining whether the proposal meets the requirements of the Exchange Act and, pursuant to its Rules of Practice, places the burden on the listing exchange to demonstrate the validity of its contentions and to establish that the requirements of the Exchange Act have been met. Id. at 37582.

76 These statistics are based on samples of bitcoin liquidity in USD (excluding stablecoins or Euro liquidity) based on executable quotes on Coinbase Pro, Gemini, Bitstamp, Kraken, LMAX Exchange, BinanceUS, and OKCoin during February 2021.

77 ProShares Bitcoin Strategy ETF (BITO); VanEck Bitcoin Strategy ETF (XBTF); Valkyrie Bitcoin Strategy ETF (BTF).

CFTC regulated futures contracts cash-settled in US dollars based on the CME BRR, which is a volume-weighted composite of U.S. dollar-bitcoin trading activity on certain constituent exchanges including Bitstamp, Coinbase, Gemini, itBit, and Kraken.[78]

The CME BRR is based on substantially the same pricing data from digital asset trading platforms as the Index used by the Trust. The Index is designed to reflect the performance of bitcoin in U.S. dollars and the current constituent exchange composition of the Index is Bitstamp, Coinbase, Gemini, itBit and Kraken. As noted recently by a commenter on another exchange rule filing for a Spot Bitcoin ETP, Bitcoin Futures ETFs and the Trust are exposed to the same underlying pricing data and the same risks of manipulation.[79]

Both the Exchange and Sponsor believe that there is no basis for determining that the Bitcoin Futures ETFs satisfy Section 6(b)(5) of the Exchange Act while the Trust does not. Bitcoin pricing, whether in the spot market or the futures market, is determined on the digital asset trading platforms where supply and demand interact; and there is almost complete overlap in the underlying digital asset trading platforms that supply pricing information for the reference indices used by both the CME Bitcoin Futures market and the Trust.

Shortly after the Bitcoin Futures ETFs began trading, the Commission again disapproved a rule filing submitted by the Exchange to list and trade a Spot Bitcoin ETP

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78 See CME CF Bitcoin Reference Rate Index data at https://www.cmegroup.com/trading/cryptocurrency-indices/cf-bitcoin-reference-rate.html.

79 *See* Letter from Joseph A. Hall et al. to Vanessa Countryman on SR-NYSEArca-2021-90 (Nov. 29, 2021).

on the grounds that the Exchange had failed to demonstrate satisfaction of Section 6(b)(5).[80] The Commission specifically disagreed with the Exchange's premises that (i) it is inconsistent with the Section 6(b)(5) standard for the Commission to permit a Bitcoin Futures ETF registered under the 1940 Act to launch but to disapprove the approval of a Spot Bitcoin ETP; (ii) it is inconsistent for the Commission to allow a Bitcoin Futures ETF that trades exclusively in CME Bitcoin Futures contracts and conclude that the CME Bitcoin Futures market is not a "market of significant size" under the Section 6(b)(5) standard; and (iii) while the 1940 Act provides certain investor protections, it is not designed to prevent or mitigate potential market manipulation in the markets for the assets underlying ETF Shares, which in the case of Bitcoin Futures ETFs would be the CME Bitcoin Futures market. Instead, the disapproval order stated that each proposed rule change is considered on its own merits and noted that the proposed rule did not relate to a product regulated under the 1940 Act and did not relate to the same underlying holdings as the Bitcoin Futures ETFs. In practice, however, the disapproval order did not address why a Spot Bitcoin ETP fails to satisfy the Section 6(b)(5) standard when it is exposed to the same underlying risks of manipulation as the CME Bitcoin Futures contracts primarily held by Bitcoin Futures ETFs, which have been allowed to register and list.

As recently as 2020, the Commission approved new exchange listing rules permitting all ETFs registered under the 1940 Act that meet Rule 6c-11, including

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80 See Securities Exchange Act Release No. 93559 (November 12, 2021) 86 FR 64539 (November 18, 2021) (SR–CboeBZX–2021–019) (Order Disapproving a Proposed Rule Change to List and Trade Shares of the VanEck Bitcoin Trust under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares (the "VanEck Order")).

Bitcoin Futures ETFs, to list under an exchange's generic listing standards without having to submit separate rule filing pursuant to Section 19(b).[81] In determining that the rule change was reasonably designed to help prevent fraudulent and manipulative acts and practices, the approval order stated that ETFs would be required to disclose their respective portfolio holdings under the 1940 Act and that the exchange rule included requirements relating to fire walls and procedures to prevent the use and dissemination of material, non-public information regarding the applicable ETF index and portfolio.[82] In approving the generic listing standards, the SEC did not require in-depth analysis into any particular markets or index components.[83] As a result, Bitcoin Futures ETFs are permitted to list and trade under generic listing standards without the requirement for a product specific rule filing such as this one – even when the underlying market, such as bitcoin markets underlying the CME Bitcoin Futures contracts, mirror those proposed as reference markets in the Index used by the Trust and other spot bitcoin ETP listing proposals.

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81 See Securities Exchange Act Release No. 88566 (April 6, 2020), 85 FR 20312 (April 10, 2020) (SR-CboeBZX-2019-097) (Notice of Filing of Amendment No. 2 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 2, to Adopt BZX Rule 14.11(l) Governing the Listing and Trading of Exchange-Traded Fund Shares).

82 *Id.*

83 *Id.* With regard to surveillance, the approval order stated only that the rule change required the exchange to implement and maintain written surveillance procedure for ETF Shares and noted that the exchange would use its existing surveillance procedures applicable to derivative products to monitor trading in ETF Shares. While noting the ability of an exchange to rely on FINRA for information related to certain securities held by series of ETF Shares, the approval order focused on the exchange's surveillance of the market for ETF Shares.

As such, the Exchange and Sponsor note that: (i) the risks of manipulation in the bitcoin markets impacting the Trust are generally indistinguishable from those same risks impacting Bitcoin Futures ETFs; (ii) the Trust will have the same pricing sources as CME Bitcoin Futures and, thus, Bitcoin Futures ETFs; and (iii) the Trust will generally be subject to the same risks of manipulation as shares of Bitcoin Futures ETFs. It follows that the Exchange and Sponsor both believe that this proposal is designed to prevent fraudulent and manipulative acts and practices as compared to Bitcoin Futures ETFs and is therefore consistent with the Act. In addition to this proposal meeting the applicable "regulated market of significant size" standard as laid out above, approving this proposal is consistent with the treatment of substantially similar products, and the Exchange believes that any finding to the contrary would result in arbitrarily disparate treatment to the Trust.

Rule 14.11(e)(4) - Commodity-Based Trust Shares

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed on the Exchange pursuant to the initial and continued listing criteria in Exchange Rule 14.11(e)(4). The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The Trust has represented to the Exchange that it will advise the Exchange of any failure by the Trust or the Shares to comply with the continued listing requirements,

and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Trust or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange may obtain information regarding trading in the Shares and listed bitcoin derivatives via the ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

The Exchange will obtain a representation that the Trust's NAV will be calculated daily and that these values and information about the assets of the Trust will be made available to all market participants at the same time. The Exchange notes that, as defined in Rule 14.1 1(e)(4)(C)(i), the Shares will be: (a) issued by a trust that holds a specified commodity[84] deposited with the trust; (b) issued by such trust in a specified aggregate minimum number in return for a deposit of a quantity of the underlying commodity; and (c) when aggregated in the same specified minimum number, may be redeemed at a holder's request by such trust which will deliver to the redeeming holder the quantity of the underlying commodity.

Upon termination of the Trust, the Shares will be removed from listing. The Trustee, Delaware Trust Company, is a trust company having substantial capital and surplus. The Delaware Trust Company also has the experience and facilities for handling

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84 For purposes of Rule 14.11(e)(4), the term commodity takes on the definition of the term as provided in the Commodity Exchange Act. As noted above, the CFTC has opined that Bitcoin is a commodity as defined in Section 1a(9) of the Commodity Exchange Act. See Coinflip.

corporate trust business, as required under Rule 14.11(e)(4)(E)(iv)(a). No change will be made to the trustee without prior notice to and approval of the Exchange. The Exchange also notes that, pursuant to Rule 14.11(e)(4)(F), neither the Exchange nor any agent of the Exchange shall have any liability for damages, claims, losses or expenses caused by any errors, omissions or delays in calculating or disseminating any underlying commodity value, the current value of the underlying commodity required to be deposited to the Trust in connection with issuance of Commodity- Based Trust Shares; resulting from any negligent act or omission by the Exchange, or any agent of the Exchange, or any act, condition or cause beyond the reasonable control of the Exchange, its agent, including, but not limited to, an act of God; fire; flood; extraordinary weather conditions; war; insurrection; riot; strike; accident; action of government; communications or power failure; equipment or software malfunction; or any error, omission or delay in the reports of transactions in an underlying commodity. Finally, as required in Rule 14.11(e)(4)(G), the Exchange notes that any registered market maker ("Market Maker") in the Shares must file with the Exchange in a manner prescribed by the Exchange and keep current a list identifying all accounts for trading in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, which the registered Market Maker may have or over which it may exercise investment discretion. No registered Market Maker shall trade in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, in an account in which a registered Market Maker, directly or indirectly, controls trading activities, or has a direct interest in the profits or losses thereof, which has not been reported to the Exchange as required by this

Rule. In addition to the existing obligations under Exchange rules regarding the production of books and records (see, e.g., Rule 4.2), the registered Market Maker in Commodity-Based Trust Shares shall make available to the Exchange such books, records or other information pertaining to transactions by such entity or registered or non-registered employee affiliated with such entity for its or their own accounts for trading the underlying physical commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, as may be requested by the Exchange.

Trading Halts

With respect to trading halts, the Exchange may consider all relevant factors in exercising its discretion to halt or suspend trading in the Shares. The Exchange will halt trading in the Shares under the conditions specified in BZX Rule 11.18. Trading may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. These may include: (1) the extent to which trading is not occurring in the bitcoin underlying the Shares; or (2) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. Trading in the Shares also will be subject to Rule 14.11(e)(4)(E)(ii), which sets forth circumstances under which trading in the Shares may be halted.

Trading Rules

The Exchange deems the Shares to be equity securities, thus rendering trading in the Shares subject to the Exchange's existing rules governing the trading of equity securities. BZX will allow trading in the Shares during all trading sessions on the Exchange. The Exchange has appropriate rules to facilitate transactions in the Shares

during all trading sessions. As provided in BZX Rule 11.11(a) the minimum price variation for quoting and entry of orders in securities traded on the Exchange is $0.01 where the price is greater than $1.00 per share or $0.0001 where the price is less than $1.00 per share.

Surveillance

The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The issuer has represented to the Exchange that it will advise the Exchange of any failure by the Trust or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Trust or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange may obtain information regarding trading in the Shares and CME Bitcoin Futures via ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.[85]

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[85] For a list of the current members and affiliate members of ISG, see www.isgportal.com.

Information Circular

Prior to the commencement of trading, the Exchange will inform its members in an Information Circular of the special characteristics and risks associated with trading the Shares. Specifically, the Information Circular will discuss the following: (i) the procedures for the creation and redemption of Baskets (and that the Shares are not individually redeemable); (ii) BZX Rule 3.7, which imposes suitability obligations on Exchange members with respect to recommending transactions in the Shares to customers; (iii) how information regarding the IIV and the Trust's NAV are disseminated; (iv) the risks involved in trading the Shares outside of Regular Trading Hours[86] when an updated IIV will not be calculated or publicly disseminated; (v) the requirement that members deliver a prospectus to investors purchasing newly issued Shares prior to or concurrently with the confirmation of a transaction; and (vi) trading information.

In addition, the Information Circular will advise members, prior to the commencement of trading, of the prospectus delivery requirements applicable to the Shares. Members purchasing the Shares for resale to investors will deliver a prospectus to such investors. The Information Circular will also discuss any exemptive, no-action and interpretive relief granted by the Commission from any rules under the Act.

(b) Statutory Basis

The Exchange believes that the proposal is consistent with Section 6(b) of the

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86 Regular Trading Hours is the time between 9:30 a.m. and 4:00 p.m. Eastern Time.

Act[87] in general and Section 6(b)(5) of the Act[88] in particular in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest.

The Commission has approved numerous series of Trust Issued Receipts,[89] including Commodity-Based Trust Shares,[90] to be listed on U.S. national securities exchanges. In order for any proposed rule change from an exchange to be approved, the Commission must determine that, among other things, the proposal is consistent with the requirements of Section 6(b)(5) of the Act, specifically including: (i) the requirement that a national securities exchange's rules are designed to prevent fraudulent and manipulative acts and practices;[91] and (ii) the requirement that an exchange proposal be designed, in

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87 15 U.S.C. 78f.

88 15 U.S.C. 78f(b)(5).

89 See Exchange Rule 14.11(f).

90 Commodity-Based Trust Shares, as described in Exchange Rule 14.11(e)(4), are a type of Trust Issued Receipt.

91 As the Exchange has stated in a number of other public documents, it continues to believe that bitcoin is resistant to price manipulation and that "other means to prevent fraudulent and manipulative acts and practices" exist to justify dispensing with the requisite surveillance sharing agreement. The geographically diverse and continuous nature of bitcoin trading render it difficult and prohibitively costly to manipulate the price of bitcoin. The fragmentation across bitcoin platforms, the relatively slow speed of transactions, and the capital necessary to maintain a significant presence on each trading platform make manipulation of bitcoin prices through continuous trading activity challenging. To the extent that there are bitcoin exchanges engaged in or allowing wash trading or other activity intended to manipulate the price of bitcoin on other markets, such pricing does not

general, to protect investors and the public interest. In order to meet this standard in a proposal to list and trade a series of Commodity-Based Trust Shares, the Commission requires that an exchange demonstrate that there is a comprehensive surveillance-sharing agreement in place with a regulated market of significant size.

The Commission's prior illustrative guidance in interpreting the terms "significant market" and "market of significant size" to include "a market (or group of markets) as to which (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 a surveillance-sharing agreement would assist the ETP listing market 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."[92]

The Exchange believes that this proposal is consistent with the requirements of Section 6(b)(5) of the Act and, as described and discussed above, the Sponsor's analysis demonstrates that the Exchange has satisfied the requirements under the Act that the CME Bitcoin Futures Market (i) is a regulated market; (ii) has a comprehensive

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normally impact prices on other exchanges because participants will generally ignore markets with quotes that they deem non-executable. Moreover, the linkage between the bitcoin markets and the presence of arbitrageurs in those markets means that the manipulation of the price of bitcoin price on any single venue would require manipulation of the global bitcoin price in order to be effective. Arbitrageurs must have funds distributed across multiple trading platforms in order to take advantage of temporary price dislocations, thereby making it unlikely that there will be strong concentration of funds on any particular bitcoin exchange or OTC platform. As a result, the potential for manipulation on a trading platform would require overcoming the liquidity supply of such arbitrageurs who are effectively eliminating any cross-market pricing differences.

92 Id.

surveillance-sharing agreement with the Exchange; and (iii) satisfies the Commission's "significant market" definition."

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed on the Exchange pursuant to the initial and continued listing criteria in Exchange Rule 14.11(e)(4). The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The Trust has represented to the Exchange that it will advise the Exchange of any failure by the Trust or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Trust or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares and bitcoin futures with with entities that are members of the ISG and the Exchange or FINRA, on behalf of the Exchange, or both, may obtain information regarding trading in the Shares and listed bitcoin derivatives via the ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the CTA. Quotation and last sale information for bitcoin is widely disseminated through a variety of major market data vendors, including Bloomberg and Reuters, as well as the Index. Information relating to trading, including price and volume information, in bitcoin is available from major market data vendors and from the exchanges on which bitcoin are traded. Depth of book information is also available from bitcoin exchanges. The normal trading hours for bitcoin exchanges are 24 hours per day, 365 days per year. The website for the Trust, which will be publicly accessible at no charge, will contain the following information: (a) the current NAV per Share daily and the prior business day's NAV and the reported closing price; (b) the BZX Official Closing Price in relation to the NAV as of the time the NAV is calculated and a calculation of the premium or discount of such price against such NAV; (c) data in chart form displaying the frequency distribution of discounts and premiums of the Official Closing Price against the NAV, within appropriate ranges for each of the four previous calendar quarters (or for the life of the Trust, if shorter); (d) the prospectus; and other applicable quantitative information. The Trust will also disseminate the Trust's holdings on a daily basis on the Trust's website. The value of the Index will be made available by one or more major market data vendors, updated at least every 15 seconds during Regular Trading Hours.

The Exchange will halt trading in the Shares under the conditions specified in BZX Rule 11.18. Trading may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. These may include: (1) the extent to which trading is not occurring in the bitcoin underlying the

Shares; or (2) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. Trading in the Shares also will be subject to Rule 14.11(e)(4)(E)(ii), which sets forth circumstances under which trading in the Shares may be halted.

For the above reasons, the Exchange believes that the proposed rule change is consistent with the requirements of Section 6(b)(5) of the Act.

4. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of the Act. The Exchange notes that the proposed rule change, rather will facilitate the listing and trading of an additional exchange-traded product that will enhance competition among both market participants and listing venues, to the benefit of investors and the marketplace.

5. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others

The Exchange has neither solicited nor received written comments on the proposed rule change.

6. Extension of Time Period for Commission Action

Not applicable.

7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)

Not applicable.

8. Proposed Rule Change Based on Rule of Another Self-Regulatory Organization or of the Commission

Not applicable.

9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

10. Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

Not applicable.

11. Exhibits

Exhibit 1: Completed Notice of the Proposed Rule Change for publication in the Federal Register.

Exhibit 2 – 5: Not applicable.

EXHIBIT 1

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34- ; File No. SR-CboeBZX-2021-039 Amendment No. 1]

[Insert date]

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Notice of Filing of a Proposed Rule Change to List and Trade Shares of the Wise Origin Bitcoin Trust (the "Trust"), Under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] and Rule 19b-4 thereunder,[2] notice is hereby given that on [insert date], Cboe BZX Exchange, Inc. (the "Exchange" or "BZX") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe BZX Exchange, Inc. (the "Exchange" or "BZX") is filing with the Securities and Exchange Commission ("Commission") a proposed rule change to list and trade shares of the Wise Origin Bitcoin Trust (the "Trust"),[3] under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares. The shares of the Trust are referred to herein as the "Shares."

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1 15 U.S.C. 78s(b)(1).

2 17 CFR 240.19b-4.

3 The Trust was formed as a Delaware statutory trust on March 17, 2021 and is operated as a grantor trust for U.S. federal tax purposes. The Trust has no fixed termination date.

The text of the proposed rule change is also available on the Exchange's website (http://markets.cboe.com/us/equities/regulation/rule_filings/bzx/), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

This Amendment No. 1 to SR-CboeBZX-2021-051 amends and replaces in its entirety the proposal as originally submitted on May 10, 2021. The Exchange submits this Amendment No. 1 in order to clarify certain points and add additional details to the proposal.

The Exchange proposes to list and trade the Shares of the Trust under BZX Rule 14.11(e)(4),[4] which governs the listing and trading of Commodity-Based Trust Shares on the Exchange.[5] FD Funds Management LLC is the sponsor of the Trust ("Sponsor").

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[4] The Commission approved BZX Rule 14.11(e)(4) in Securities Exchange Act Release No. 65225 (August 30, 2011), 76 FR 55148 (September 6, 2011) (SR-BATS-2011-018).

[5] All statements and representations made in this filing regarding (a) the description of the portfolio, (b) limitations on portfolio holdings or reference assets, or (c) the applicability of Exchange rules and surveillance procedures shall constitute continued listing requirements for listing the Shares on the Exchange.

The Shares will be registered with the Commission by means of the Trust's registration statement on Form S-1 (the "Registration Statement").[6] The Trust is not permitted or required to register under the Investment Company Act of 1940, as amended (the "1940 Act")[7], and therefore is not subject to regulation under the 1940 Act.[8] Further, the Registration Statement states that the Trust will not hold or trade in commodity interests regulated by the Commodity Exchange Act of 1936, as amended (the "CEA"), and therefore is not a commodity pool for purposes of the CEA.[9] The Exchange represents that upon approval of this proposal by the Commission, the Shares would satisfy the requirements of BZX Rule 14.11(e)(4) and thereby qualify for listing on the Exchange.

As further discussed below, the Commission has historically approved or disapproved exchange filings to list and trade series of Trust Issued Receipts, including spot-based Commodity-Based Trust Shares, on the basis of whether the listing exchange has in place a comprehensive surveillance sharing agreement with a regulated market of significant size related to the underlying commodity.[10] A survey of previously approved series of Commodity-Based Trust Shares and Currency Trust Shares makes clear that the

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6 See draft Registration Statement on Form S-1, dated March 24, 2021 submitted to the Commission by the Sponsor on behalf of the Trust. The descriptions of the Trust, the Shares, and the Index (as defined below) contained herein are based, in part, on information in the Registration Statement. The Registration Statement is not yet effective and the Shares will not trade on the Exchange until such time that the Registration Statement is effective.

7 15 U.S.C. 80a-1.

8 See above.

9 See above.

10 See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018). This proposal was subsequently disapproved by the Commission. See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018) (the "Winklevoss Order").

spot markets for commodities and currencies held in such ETPs are generally unregulated. In fact, the Commission specifically noted in the Winklevoss Order that the first gold ETP approval order, which was also the first commodity-trust ETP, "was based on an assumption that the currency market and the spot gold market were largely unregulated."[11] This makes clear that the applicable standard is not whether the underlying commodity market itself is regulated. Further to this point, prior orders have also emphasized that in every prior approval order for Commodity-Based Trust Shares there was a regulated derivatives market of significant size, generally a Commodity Futures Trading Commission (the "CFTC") regulated futures market.[12] Despite the lack

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11 See Winklevoss Order at 37592 and Exchange Act Release No. 50603 (Oct. 28, 2004), 69 FR 64614 (Nov. 5, 2004) (SR-NYSE-2004-22) (order approving the listing and trading of streetTRACKS Gold Shares) (the "First Gold Approval Order").

12 See Winklevoss Order at 37592. See also the First Gold Approval Order at 64618–19; iShares COMEX Gold Trust, Exchange Act Release No. 51058 (Jan. 19, 2005), 70 FR 3749, 3751, 3754–55 (Jan. 26, 2005) (SR-Amex-2004-38); iShares Silver Trust, Exchange Act Release No. 53521 (Mar. 20, 2006), 71 FR 14967, 14968, 14973–74 (Mar. 24, 2006) (SR-Amex-2005-072); ETFS Gold Trust, Exchange Act Release No. 59895 (May 8, 2009), 74 FR 22993, 22994–95, 22998, 23000 (May 15, 2009) (SR-NYSEArca-2009-40); ETFS Silver Trust, Exchange Act Release No. 59781 (Apr. 17, 2009), 74 FR 18771, 18772, 18775–77 (Apr. 24, 2009) (SR-NYSEArca-2009-28); ETFS Palladium Trust, Exchange Act Release No. 61220 (Dec. 22, 2009), 74 FR 68895, 68896 (Dec. 29, 2009) (SR-NYSEArca-2009-94) (notice of proposed rule change included NYSE Arca's representation that "[t]he most significant palladium futures exchanges are the NYMEX and the Tokyo Commodity Exchange," that "NYMEX is the largest exchange in the world for trading precious metals futures and options," and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which NYMEX is a member, Exchange Act Release No. 60971 (Nov. 9, 2009), 74 FR 59283, 59285–86, 59291 (Nov. 17, 2009)); ETFS Platinum Trust, Exchange Act Release No. 61219 (Dec. 22, 2009), 74 FR 68886, 68887–88 (Dec. 29, 2009) (SR-NYSEArca-2009-95) (notice of proposed rule change included NYSE Arca's representation that "[t]he most significant platinum futures exchanges are the NYMEX and the Tokyo Commodity Exchange," that "NYMEX is the largest exchange in the world for trading precious metals futures and options," and that NYSE Arca "may obtain trading information via the

Intermarket Surveillance Group," of which NYMEX is a member, Exchange Act Release No. 60970 (Nov. 9, 2009), 74 FR 59319, 59321, 59327 (Nov. 17, 2009)); Sprott Physical Gold Trust, Exchange Act Release No. 61496 (Feb. 4, 2010), 75 FR 6758, 6760 (Feb. 10, 2010) (SR-NYSEArca-2009-113) (notice of proposed rule change included NYSE Arca's representation that the COMEX is one of the "major world gold markets," that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," and that NYMEX, of which COMEX is a division, is a member of the Intermarket Surveillance Group, Exchange Act Release No. 61236 (Dec. 23, 2009), 75 FR 170, 171, 174 (Jan. 4, 2010)); Sprott Physical Silver Trust, Exchange Act Release No. 63043 (Oct. 5, 2010), 75 FR 62615, 62616, 62619, 62621 (Oct. 12, 2010) (SR-NYSEArca-2010-84); ETFS Precious Metals Basket Trust, Exchange Act Release No. 62692 (Aug. 11, 2010), 75 FR 50789, 50790 (Aug. 17, 2010) (SR-NYSEArca-2010-56) (notice of proposed rule change included NYSE Arca's representation that "the most significant gold, silver, platinum and palladium futures exchanges are the COMEX and the TOCOM" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 62402 (Jun. 29, 2010), 75 FR 39292, 39295, 39298 (July 8, 2010)); ETFS White Metals Basket Trust, Exchange Act Release No. 62875 (Sept. 9, 2010), 75 FR 56156, 56158 (Sept. 15, 2010) (SR-NYSEArca-2010-71) (notice of proposed rule change included NYSE Arca's representation that "the most significant silver, platinum and palladium futures exchanges are the COMEX and the TOCOM" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 62620 (July 30, 2010), 75 FR 47655, 47657, 47660 (Aug. 6, 2010)); ETFS Asian Gold Trust, Exchange Act Release No. 63464 (Dec. 8, 2010), 75 FR 77926, 77928 (Dec. 14, 2010) (SR-NYSEArca-2010-95) (notice of proposed rule change included NYSE Arca's representation that "the most significant gold futures exchanges are the COMEX and the Tokyo Commodity Exchange," that "COMEX is the largest exchange in the world for trading precious metals futures and options," and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 63267 (Nov. 8, 2010), 75 FR 69494, 69496, 69500–01 (Nov. 12, 2010)); Sprott Physical Platinum and Palladium Trust, Exchange Act Release No. 68430 (Dec. 13, 2012), 77 FR 75239, 75240–41 (Dec. 19, 2012) (SR-NYSEArca-2012-111) (notice of proposed rule change included NYSE Arca's representation that "[f]utures on platinum and palladium are traded on two major exchanges: The New York Mercantile Exchange ... and Tokyo Commodities Exchange" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," of which COMEX is a member, Exchange Act Release No. 68101 (Oct. 24, 2012), 77 FR 65732, 65733, 65739 (Oct. 30, 2012)); APMEX Physical—1 oz. Gold Redeemable Trust, Exchange Act Release No. 66930 (May 7, 2012), 77 FR 27817, 27818 (May 11, 2012) (SR-NYSEArca- 2012-18) (notice of proposed rule change included NYSE Arca's representation that NYSE Arca "may obtain trading information via the

of regulation of the underlying spot commodity and currency markets, the Commission approved series of Currency and Commodity-Based Trust Shares, including those that held gold, silver, platinum, palladium, copper, and other commodities and currencies, because it determined that the futures markets for these commodities and currencies represented regulated markets of significant size and that the listing exchange had a surveillance sharing agreement in place with that market.[13]

Intermarket Surveillance Group," of which COMEX is a member, and that gold futures are traded on COMEX and the Tokyo Commodity Exchange, with a cross-reference to the proposed rule change to list and trade shares of the ETFS Gold Trust, in which NYSE Arca represented that COMEX is one of the "major world gold markets," Exchange Act Release No. 66627 (Mar. 20, 2012), 77 FR 17539, 17542–43, 17547 (Mar. 26, 2012)); JPM XF Physical Copper Trust, Exchange Act Release No. 68440 (Dec. 14, 2012), 77 FR 75468, 75469–70, 75472, 75485–86 (Dec. 20, 2012) (SR-NYSEArca-2012-28); iShares Copper Trust, Exchange Act Release No. 68973 (Feb. 22, 2013), 78 FR 13726, 13727, 13729–30, 13739–40 (Feb. 28, 2013) (SR-NYSEArca-2012-66); First Trust Gold Trust, Exchange Act Release No. 70195 (Aug. 14, 2013), 78 FR 51239, 51240 (Aug. 20, 2013) (SR-NYSEArca-2013-61) (notice of proposed rule change included NYSE Arca's representation that FINRA, on behalf of the exchange, may obtain trading information regarding gold futures and options on gold futures from members of the Intermarket Surveillance Group, including COMEX, or from markets "with which [NYSE Arca] has in place a comprehensive surveillance sharing agreement," and that gold futures are traded on COMEX and the Tokyo Commodity Exchange, with a cross-reference to the proposed rule change to list and trade shares of the ETFS Gold Trust, in which NYSE Arca represented that COMEX is one of the "major world gold markets," Exchange Act Release No. 69847 (June 25, 2013), 78 FR 39399, 39400, 39405 (July 1, 2013)); Merk Gold Trust, Exchange Act Release No. 71378 (Jan. 23, 2014), 79 FR 4786, 4786–87 (Jan. 29, 2014) (SR-NYSEArca-2013-137) (notice of proposed rule change included NYSE Arca's representation that "COMEX is the largest gold futures and options exchange" and that NYSE Arca "may obtain trading information via the Intermarket Surveillance Group," including with respect to transactions occurring on COMEX pursuant to CME and NYMEX's membership, or from exchanges "with which [NYSE Arca] has in place a comprehensive surveillance sharing agreement," Exchange Act Release No. 71038 (Dec. 11, 2013), 78 FR 76367, 76369, 76374 (Dec. 17, 2013)); Long Dollar Gold Trust, Exchange Act Release No. 79518 (Dec. 9, 2016), 81 FR 90876, 90881, 90886, 90888 (Dec. 15, 2016) (SR-NYSEArca-2016-84).

13 Id.

The Exchange acknowledges that unregulated currency and commodity markets do not provide the same protections as the markets that are subject to the Commission's oversight. However, the Commission has consistently looked to surveillance sharing agreements with an underlying futures market to determine whether ETPs holding currency or commodities were consistent with the Act, as established above. As such, the Commission's regulated market of significant size test does not require that the spot bitcoin market be regulated to approve this proposal. To the contrary, precedent makes clear that any requirement that the spot bitcoin market be a "regulated market" prior to approval would be incongruous with all prior spot commodity and currency approval orders. With this in mind, the CME Bitcoin Futures market is the proper market for the Commission to consider in determining whether this proposal is consistent with the Act. The Exchange has a comprehensive surveillance sharing agreement in place with CME, which operates a bitcoin futures market that, as established by the included analysis below, represents a regulated market of significant size related to the underlying commodity (bitcoin) to be held by the Trust. Therefore, both the Exchange and Sponsor believe that the CME Bitcoin Futures market satisfies the standard that the Commission has applied to all previously approved series of Commodity-Based Trust Shares and that this proposal should be approved.

Background

Bitcoin is a digital asset based on the decentralized, open source protocol of the peer-to- peer computer network launched in 2009 that governs the creation, movement, and ownership of bitcoin and hosts the public ledger, or "blockchain," on which all bitcoin transactions are recorded (the "Bitcoin Network" or "Bitcoin"). The

decentralized nature of the Bitcoin Network allows parties to transact directly with one another based on cryptographic proof instead of relying on a trusted third party. The protocol also lays out the rate of issuance of new bitcoin within the Bitcoin Network, a rate that is reduced by half approximately every four years with an eventual hard cap of 21 million. It is generally understood that the combination of these two features—a systemic hard cap of 21 million bitcoin and the ability to transact trustlessly with anyone connected to the Bitcoin Network—gives bitcoin its value.[14]

The first rule filing proposing to list an exchange-traded product to provide exposure to bitcoin in the U.S. was submitted by the Exchange on June 30, 2016.[15] At that time, blockchain technology, and digital assets that utilized it, were relatively new to the broader public. The market cap of all bitcoin in existence at that time was approximately $10 billion. No registered offering of digital asset securities or shares in an investment vehicle with exposure to bitcoin or any other cryptocurrency had yet been conducted, and the regulated infrastructure for conducting a digital asset securities offering had not begun to develop.[16] Similarly, regulated U.S. CME Bitcoin Futures did

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14 For additional information about bitcoin and the Bitcoin Network, see https://bitcoin.org/en/getting-started; https://www.fidelitydigitalassets.com/articles/addressing-bitcoin-criticisms; and https://www.vaneck.com/education/investment-ideas/investing-in-bitcoin-and-digital-assets/.

15 See Securities Exchange Act Release No. 83723 (July 26, 2018), 83 FR 37579 (August 1, 2018) (the "Winklevoss Order"). This proposal was subsequently disapproved by the Commission.

16 Digital assets that are securities under U.S. law are referred to throughout this proposal as "digital asset securities." All other digital assets, including bitcoin, are referred to interchangeably as "cryptocurrencies" or "virtual currencies." The term "digital assets" refers to all digital assets, including both digital asset securities and cryptocurrencies, together.

not exist. The CFTC had determined that bitcoin is a commodity,[17] but had not engaged in significant enforcement actions in the space. The New York Department of Financial Services ("NYDFS") adopted its final BitLicense regulatory framework in 2015, but had only approved four entities to engage in activities relating to virtual currencies (whether through granting a BitLicense or a limited- purpose trust charter) as of June 30, 2016.[18] While the first over-the-counter bitcoin fund launched in 2013, public trading was limited and the fund had only $60 million in assets.[19] There were very few, if any, traditional financial institutions engaged in the space, whether through investment or providing services to digital asset companies. In January 2018, the Staff of the Commission noted in a letter to the Investment Company Institute and SIFMA that it was not aware, at that time, of a single custodian providing fund custodial services for digital assets.[20]

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17 See "In the Matter of Coinflip, Inc." ("Coinflip") (CFTC Docket 15-29 (September 17, 2015)) (order instituting proceedings pursuant to Sections 6(c) and 6(d) of the CEA, making findings and imposing remedial sanctions), in which the CFTC stated:

"Section 1a(9) of the CEA defines 'commodity' to include, among other things, 'all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in.' 7 U.S.C. § 1a(9). The definition of a 'commodity' is broad. See, e.g., Board of Trade of City of Chicago v. SEC, 677 F. 2d 1137, 1142 (7th Cir. 1982). Bitcoin and other virtual currencies are encompassed in the definition and properly defined as commodities."

18 A list of virtual currency businesses that are entities regulated by the NYDFS is available on the NYDFS website. See https://www.dfs.ny.gov/apps_and_licensing/virtual_currency_businesses/regulated_entities

19 Data as of March 31, 2016 according to publicly available filings. See Bitcoin Investment Trust Form S-1, dated May 27, 2016, available: https://www.sec.gov/Archives/edgar/data/1588489/000095012316017801/filename1.htm.

20 See letter from Dalia Blass, Director, Division of Investment Management, U.S. Securities and Exchange Commission to Paul Schott Stevens, President & CEO, Investment Company Institute and Timothy W. Cameron, Asset Management Group - Head, Securities Industry and Financial Markets Association (January 18,

Fast forward to the first quarter of 2021 and the digital assets financial ecosystem, including bitcoin, has progressed significantly. The development of a regulated market for digital asset securities has significantly evolved, with market participants having conducted registered public offerings of both digital asset securities[21] and shares in investment vehicles holding CME Bitcoin Futures.[22] Additionally, licensed and regulated service providers have emerged to provide fund custodial services for digital assets, among other services. For example, in December 2020, the Commission adopted a conditional no-action position permitting certain special purpose broker-dealers to custody digital asset securities under Rule 15c3-3 under the Exchange Act;[23] in September 2020, the Staff of the Commission released a no-action letter permitting certain broker-dealers to operate a non-custodial Alternative Trading System ("ATS") for digital asset securities, subject to specified conditions;[24] in October 2019, the Staff of the

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2018), available at: https://www.sec.gov/divisions/investment/noaction/2018/cryptocurrency-011818.htm.

21 See Prospectus supplement filed pursuant to Rule 424(b)(1) for INX Tokens (Registration No. 333-233363), available at: https://www.sec.gov/Archives/edgar/data/1725882/000121390020023202/ea125858-424b1_inxlimited.htm.

22 See Prospectus filed by Stone Ridge Trust VI on behalf of NYDIG Bitcoin Strategy Fund Registration, available at: https://www.sec.gov/Archives/edgar/data/1764894/000119312519309942/d693146d497. htm.

23 See Securities Exchange Act Release No. 90788, 86 FR 11627 (February 26, 2021) (File Number S7-25-20) (Custody of Digital Asset Securities by Special Purpose Broker- Dealers).

24 See letter from Elizabeth Baird, Deputy Director, Division of Trading and Markets, U. S. Securities and Exchange Commission to Kris Dailey, Vice President, Risk Oversight & Operational Regulation, Financial Industry Regulatory Authority (September 25, 2020), available at: https://www. sec.gov/divisions/marketreg/mr-noaction/2020/finra-ats-role-in- settlement-of-

Commission granted temporary relief from the clearing agency registration requirement to an entity seeking to establish a securities clearance and settlement system based on distributed ledger technology,[25] and multiple transfer agents who provide services for digital asset securities registered with the Commission.[26]

Regulatory Developments

Outside the Commission's purview, the regulatory landscape has changed significantly since 2016, and cryptocurrency markets have grown and evolved as well. The market for bitcoin is approximately 100 times larger, having recently reached a market cap of over $1 trillion. According to the CME Bitcoin Futures Report, from October 25, 2021 through November 19, 2021, CFTC regulated bitcoin futures represented approximately $2.9 billion in notional trading volume on Chicago Mercantile Exchange ("CME") ("CME Bitcoin Futures") on a daily basis and notional volume was never below $1.2 billion per day.[27] Open interest was over $4 billion for the entirety of the period and at one point reached $5.5 billion. The CFTC has exercised its regulatory jurisdiction in bringing a number of enforcement actions related to bitcoin and against

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digital-asset-security-trades-09252020.pdf

25 See letter from Jeffrey S. Mooney, Associate Director, Division of Trading and Markets, U.S. Securities and Exchange Commission to Charles G. Cascarilla & Daniel M. Burstein, Paxos Trust Company, LLC (October 28, 2019), available at: https://www. sec.gov/divisions/marketreg/mr-noaction/2019/paxos-trust-company-102819-17a.pdf

26 See, e.g., Form TA-1/A filed by Tokensoft Transfer Agent LLC (CIK: 0001794142) on January 8, 2021, available at: https://www.sec.gov/Archives/edgar/data/1794142/000179414219000001/xslFTA1X01/primary_doc.xml.

27 Data sourced from the CME Bitcoin Futures Report: 19 Nov, 2021, available at: https://www.cmegroup.com/ftp/bitcoinfutures/Bitcoin_Futures_Liquidity_Report.pdf.

trading platforms that offer cryptocurrency trading.[28] The U.S. Office of the Comptroller of the Currency (the "OCC") has made clear that federally-chartered banks are able to provide custody services for cryptocurrencies and other digital assets.[29] The OCC recently granted conditional approval of two charter conversions by state-chartered trust companies to national banks, both of which provide cryptocurrency custody services.[30] NYDFS has granted no fewer than twenty-five BitLicenses, including to established public payment companies like PayPal Holdings, Inc. and Square, Inc., and limited purpose trust charters to entities providing cryptocurrency custody services, including the Trust's Custodian. The U.S. Treasury Financial Crimes Enforcement Network ("FinCEN") has released extensive guidance regarding the applicability of the Bank Secrecy Act ("BSA") and implementing regulations to virtual currency businesses,[31] and

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28 The CFTC's annual report for Fiscal Year 2020 (which ended on September 30, 2020) noted that the CFTC "continued to aggressively prosecute misconduct involving digital assets that fit within the CEA's definition of commodity" and "brought a record setting seven cases involving digital assets." See CFTC FY2020 Division of Enforcement Annual Report, available at: https://www.cftc.gov/media/5321/DOE_FY2020_AnnualReport_120120/download. The CFTC also filed on October 1, 2020, a civil enforcement action against the owner/operators of the BitMEX trading platform, which was one of the largest bitcoin derivative exchanges. See CFTC Release No. 8270-20 (October 1, 2020) available at: https://www.cftc.gov/PressRoom/PressReleases/8270-20. The CFTC also ordered Coinbase Inc. to pay $6.5 million for false, misleading, or inaccurate reporting and wash trading on March 19, 2021. See CFTC Release No. 8369-21 (March 19, 2021) available at: https://cftc.gov/PressRoom/PressReleases/8369-21.

29 See OCC News Release 2021-2 (January 4, 2021) available at: https://www.occ.gov/news-issuances/news-releases/2021/nr-occ-2021-2.html.

30 See OCC News Release 2021-6 (January 13, 2021) available at: https://www.occ.gov/news-issuances/news-releases/2021/nr-occ-2021-6.html and OCC News Release 2021-19 (February 5, 2021) available at: https://www.occ.gov/news- issuances/news-releases/2021/nr-occ-2021-19.html.

31 See FinCEN Guidance FIN-2019-G001 (May 9, 2019) (Application of FinCEN's Regulations to Certain Business Models Involving Convertible Virtual Currencies) available at: https://www.fincen.gov/sites/default/files/2019-

has proposed rules imposing requirements on entities subject to the BSA that are specific to the technological context of virtual currencies.[32] In addition, the Treasury's Office of Foreign Assets Control ("OFAC") has brought enforcement actions over apparent violations of the sanctions laws in connection with the provision of wallet management services for digital assets.[33]

U.S. Regulated Bitcoin Futures Market Growth and Maturation

CME began offering trading in futures on bitcoin in 2017. Each contract represents five bitcoin and is based on the CME CF Bitcoin Reference Rate ("BRR").[34] The contracts trade and settle like other cash-settled commodity futures contracts. Nearly every measurable metric related to CME Bitcoin Futures has trended consistently up since launch and/or accelerated upward in the past year. For example, $7.1 trillion in CME Bitcoin Futures traded in the second quarter of 2021, compared to $200 billion and

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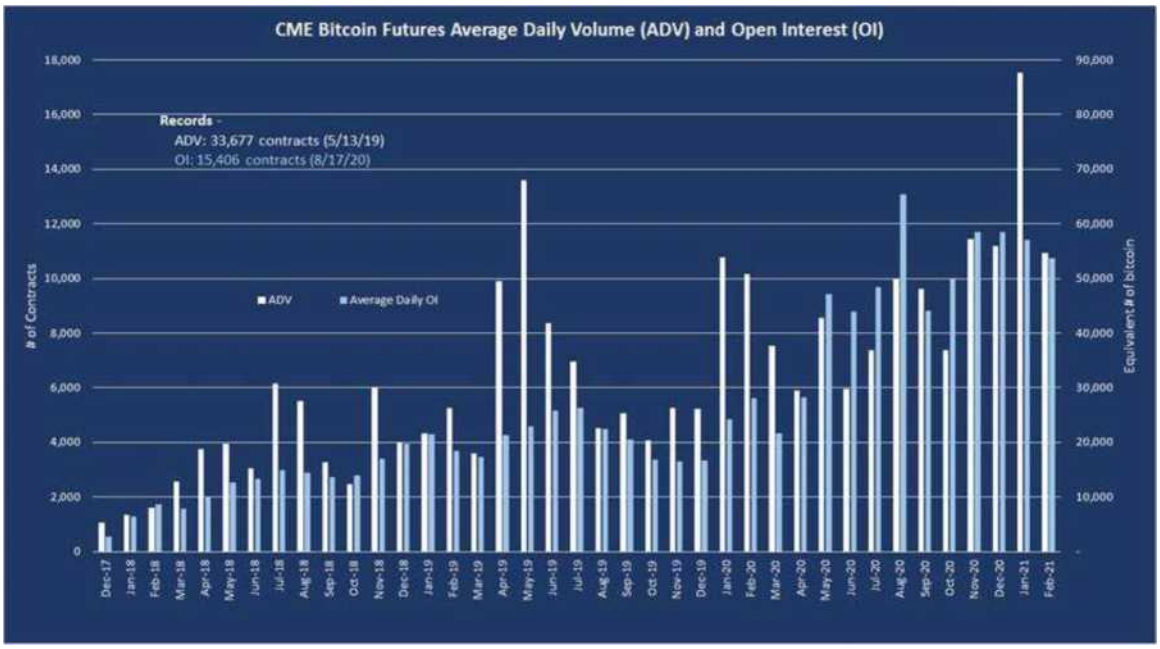
05/FinCEN%20Guidance%20CVC%20FINAL%20508.pdf

32 See U.S. Department of the Treasury Press Release: "The Financial Crimes Enforcement Network Proposes Rule Aimed at Closing Anti-Money Laundering Regulatory Gaps for Certain Convertible Virtual Currency and Digital Asset Transactions" (December 18, 2020), available at: https://home.treasury.gov/news/press-releases/sm1216.

33 See U.S. Department of the Treasury Enforcement Release: "OFAC Enters Into $98,830 Settlement with BitGo, Inc. for Apparent Violations of Multiple Sanctions Programs Related to Digital Currency Transactions" (December 30, 2020) available at: https://home.treasury.gov/system/files/126/20201230_bitgo.pdf.

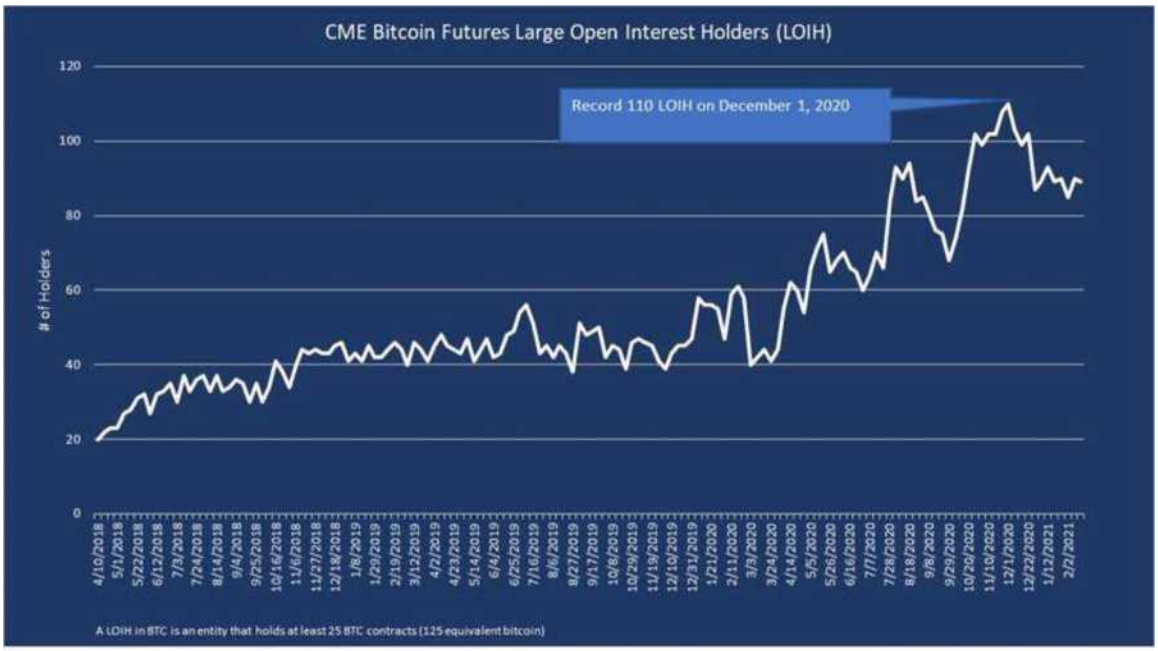
34 According to CME, the CME CF Bitcoin Reference Rate aggregates the trade flow of major bitcoin spot exchanges during a specific calculation window into a once-a-day reference rate of the U.S. dollar price of bitcoin. Calculation rules are geared toward maximum transparency and real-time replicability in underlying spot markets, including Bitstamp, Coinbase, Gemini, itBit, and Kraken. For additional information, refer to https://www.cmegroup.com/trading/cryptocurrency-indices/cf-bitcoin-reference-rate.html?redirect=/trading/cf-bitcoin-reference-rate.html.

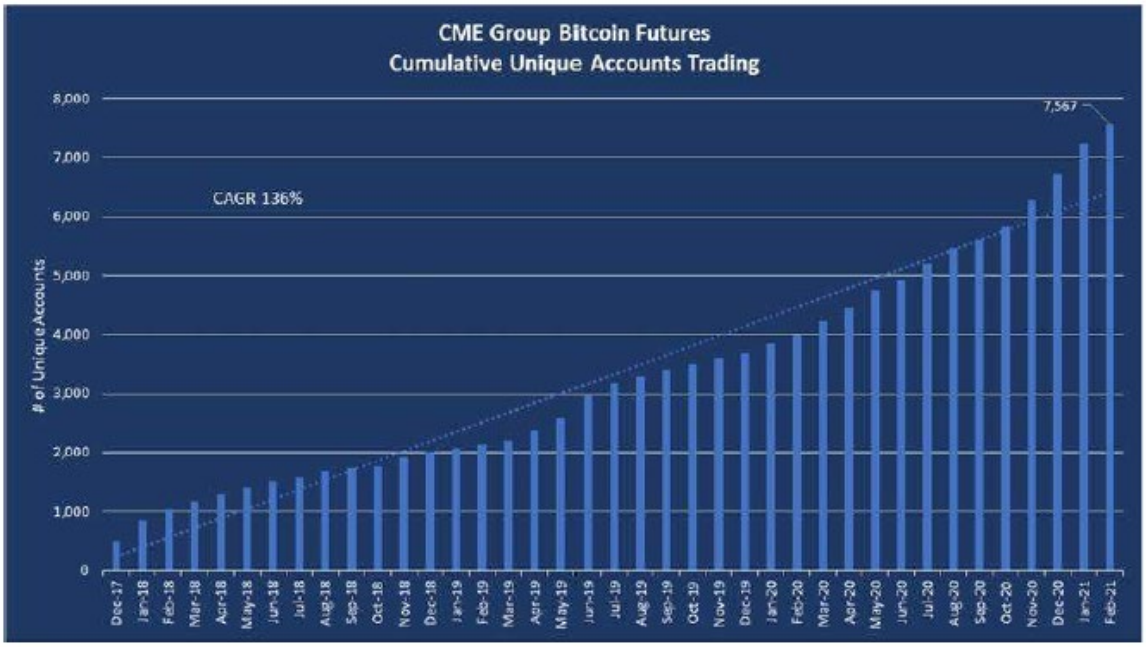
$1.3 trillion in the first quarters of 2019 and 2020, respectively. CME Bitcoin Futures traded over $500 million and represented $1.5 billion in open interest on the CME in open interest compared to $115 million in December 2019. This general upward trend in trading volume and open interest is captured in the following chart.



Similarly, the number of large open interest holders[35] has continued to increase even as the price of bitcoin has risen, as have the number of unique accounts trading CME Bitcoin Futures.

35 A large open interest holder in CME Bitcoin Futures is an entity that holds at least 25 contracts, which is the equivalent of 125 bitcoin. At a price of approximately $46,996 per bitcoin on 8/31/21, more than 80 firms had outstanding positions of greater than $5.8 million in CME Bitcoin Futures.





In addition to the regulatory developments laid out above, more traditional financial market participants appear to be embracing cryptocurrency: large insurance

companies,[36] asset managers,[37] university endowments,[38] pension funds,[39] and even historically bitcoin skeptical fund managers[40] are allocating to bitcoin. The largest over-the-counter bitcoin fund previously filed a Form 10 registration statement, which the Staff of the Commission reviewed and which took effect automatically, and is now a

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36 December 10, 2020, Massachusetts Mutual Life Insurance Company (MassMutual) announced that it had purchased $100 million in bitcoin for its general investment account. See MassMutual Press Release "Institutional Bitcoin provider NYDIG announces minority stake purchase by MassMutual" (December 10, 2020) available at: https://www.massmutual.com/about-us/news-and-press-releases/press-releases/2020/12/institutional-bitcoin-provider-nydig-announces-minority-stake-purchase-by-massmutual.

37 See e.g., "BlackRock's Rick Rieder says the world's largest asset manager has 'started to dabble' in bitcoin" (February 17, 2021) available at: https://www.cnbc.com/2021/02/17/blackrock-has-started-to-dabble-in-bitcoin-says-rick- rieder.html and "Guggenheim's Scott Minerd Says Bitcoin Should Be Worth $400,000" (December 16, 2020) available at: https://www.bloomberg.com/news/articles/2020-12-16/guggenheim-s-scott-minerd-says-bitcoin-should-be-worth-400-000.

38 See e.g., "Harvard and Yale Endowments Among Those Reportedly Buying Crypto" (January 25, 2021) available at: https://www.bloomberg.com/news/articles/2021-01- 26/harvard-and-yale-endowments-among-those-reportedly-buying-crypto.

39 See e.g., "Virginia Police Department Reveals Why its Pension Fund is Betting on Bitcoin" (February 14, 2019) available at: https://finance.yahoo.com/news/virginia-police-department-reveals-why-194558505.html.

40 See e.g., "Bridgewater: Our Thoughts on Bitcoin" (January 28, 2021) available at: https://www.bridgewater.com/research-and-insights/our-thoughts-on-bitcoin and "Paul Tudor Jones says he likes bitcoin even more now, rally still in the 'first inning'" (October 22, 2020) available at: https://www.cnbc.com/2020/10/22/-paul-tudor-jones-says-he-likes-bitcoin-even-more-now-rally-still-in-the-first-inning.html.

reporting company.[41] Established companies like Tesla, Inc.,[42] MicroStrategy Incorporated,[43] and Square, Inc.,[44] among others, have recently announced substantial investments in bitcoin in amounts as large as $1.5 billion (Tesla) and $425 million (MicroStrategy). Suffice to say, bitcoin is on its way to gaining mainstream usage.

As noted above, institutional adoption and investor interest in bitcoin has increased significantly over the last 2.5 years. A recent independent investor survey, The Institutional Investors Digital Asset Survey (the "Survey")[45] conducted by Fidelity

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41 See Letter from Division of Corporation Finance, Office of Real Estate & Construction to Barry E. Silbert, Chief Executive Officer, Grayscale Bitcoin Trust (January 31, 2020) https://www.sec.gov/Archives/edgar/data/1588489/000000000020000953/filename1.pdf

42 See Form 10-K submitted by Tesla, Inc. for the fiscal year ended December 31, 2020 at 23: https://www.sec.gov/ix?doc=/Archives/edgar/data/1318605/000156459021004599/tsla-10k_20201231.htm

43 See Form 10-Q submitted by MicroStrategy Incorporated for the quarterly period ended September 30, 2020 at 8: https://www.sec.gov/ix?doc=/Archives/edgar/data/1050446/000156459020047995/mstr-10q_20200930.htm

44 See Form 10-Q submitted by Square, Inc. for the quarterly period ended September 30, 2020 at 51: https://www.sec.gov/ix?doc=/Archives/edgar/data/ 1512673/000 15 1267320000012/sq-20200930.htm

45 The Survey included interviews with 774 institutional investors. 393 respondents were based in the U.S. and 381 respondents were based in Europe. The Survey spanned a variety of investor segments, including high-net worth individuals, financial advisors, family offices, crypto hedge and venture funds, traditional hedge funds, endowments and foundations. The first installment of The Institutional Investors Digital Assets Survey covered the period of November 2018 to January 2019 and surveyed over 400 U.S. investors. Thus, the year-over-year comparisons compare only the responses of U.S. investors. The Survey is available at the following link: https://www.fidelitydigitalassets.com/bin-public/060_www_fidelity_com/documents/FDAS/institutional-investors-digital-asset-survey.pdf.

Digital Assets, Fidelity Center for Applied Technology and Fidelity Consulting in collaboration with Greenwich Associates from November 2019 to early March 2020 found that (i) 36% of institutional investors surveyed currently invest in digital assets; (ii) almost 60% of all investors surveyed have a neutral or positive perception toward digital assets; and (iii) more than 80% of investors indicated they would be interested in institutional investment products that hold digital assets. The Survey reported that the portion of U.S. investors who have an allocation to digital assets increased to 27% from 22% in 2019 and cited multiple factors that may be driving ownership including, but not limited to, the entrance of incumbent custody, trading and derivatives service providers; and the expansion of the types of regulated derivatives available to institutional investors, which fueled awareness of digital assets.

The Survey reported that exposure to digital assets continues to grow with 22% of U.S. respondents invested in digital assets having exposure via futures, a substantial increase relative to 9% of U.S. investors surveyed in 2019. The Survey also reported that 91% of institutional investors that plan to make an allocation to digital assets expect to have at least 0.5% of their portfolio in digital assets within five years. The increase in institutional use and interest in the digital asset market is a benefit to all investors. As institutional participation increases, this helps to solidify the market for digital assets and assists in maturing the ecosystem for digital assets, creating a sounder structure for this asset class. Exchange Traded Products ("ETPs") are well established vehicles with a structure that has proven to be beneficial to investors based on the transparency, competition with respect to fees charged, and disclosures to help educate investors on risks associated with investment.

In 2021, Fidelity Digital Assets, Fidelity Center for Applied Technology and Fidelity Consulting, again in collaboration with Greenwich Associates, performed a new survey of 1,100 institutional investors.[46] The new survey took place between December 2, 2020 and April 2, 2021. The survey found that 33% of U.S. institutional investors indicated that they currently invest in digital assets and 18% do so through buying an investment product that holds digital assets. The survey also found that 69% of U.S. institutional investors indicated that digital assets should be part of an investment portfolio, and that 38% of U.S. institutional investors rated a bitcoin ETP as "appealing."

The Exchange believes that the significant increase in investor participation in and institutional adoption of bitcoin have facilitated the maturation of the bitcoin trading ecosystem.

Wise Origin Bitcoin Trust

The Registration Statement includes the following description of the Trust and its operations. The Trust will issue Shares that represent fractional undivided beneficial interests in and ownership of the Trust. The Trust is a Delaware statutory trust that operates pursuant to the Declaration of Trust and Trust Agreement (the "Trust Agreement"), between Sponsor and Delaware Trust Company, the Delaware trustee of the Trust (the "Trustee"). Sponsor manages the Trust and is responsible for the ongoing registration of the Shares. The Trust will engage Fidelity Service Company, Inc. ("FSC"), a Sponsor affiliate, to be the administrator ("Administrator"). A third-party

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46 For more information, see Memorandum from the Division of Trading and Markets regarding a September 8, 2021 meeting with representatives from Fidelity Digital Assets, et al. (Sept. 8, 2021) *available at* https://www.sec.gov/comments/sr-cboebzx-2021-039/srcboebzx2021039-250110.pdf.

transfer agent (the "Transfer Agent") will facilitate the issuance and redemption of Shares of the Trust and respond to correspondence by Trust Shareholders and others relating to its duties, maintain Shareholder accounts, and make periodic reports to the Trust.[47] Another affiliate of Sponsor, Fidelity Distributors Corporation, will be the marketing agent ("Marketing Agent") in connection with the creation and redemption of "Baskets" of Shares. The Sponsor will provide assistance in the marketing of the Shares. Fidelity Digital Assets Services, LLC ("FDAS"), another Sponsor affiliate, will serve as the Trust's bitcoin custodian (the "Custodian").

According to the Registration Statement, the Trust is neither an investment company registered under the 1940 Act, nor a commodity pool for purposes of the CEA, and neither the Trust nor the Sponsor is subject to regulation as a commodity pool operator or a commodity trading adviser in connection with the Shares.

The Trust's investment objective is to seek to track the performance of bitcoin, as measured by the performance of the Fidelity Bitcoin Index PR (the "Index"), less the Trust's expenses and other liabilities. In seeking to achieve its investment objective, the Trust will hold bitcoin and will value its Shares daily as of 4:00 p.m. Eastern time using the same methodology used to calculate the Index and process all creations and redemptions in transactions with authorized participants. The Trust is not actively managed.

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47 The Exchange notes that the Sponsor is finalizing negotiations with several service providers and it will submit an amendment to this proposal upon finalization of those arrangements.

The Custodian

The Sponsor has selected FDAS to be the Trust's Custodian. FDAS is a New York state limited liability trust[48] that serves as bitcoin custodian to institutional and individual investors. The Custodian maintains a substantial portion of the private keys associated with the Trust's bitcoin in "cold storage" or similarly secure technology. Cold storage is a safeguarding method with multiple layers of protections and protocols, by which the private key(s) corresponding to the Trust's bitcoin is (are) generated and stored in an offline manner. Private keys are generated in offline computers that are not connected to the internet so that they are resistant to being hacked. Cold storage of private keys may involve keeping such keys on a non-networked computer or electronic device or storing the public key and private keys on a storage device (for example, a USB thumb drive) or printed medium and deleting the keys from all computers.

The Custodian may receive deposits of bitcoin but may not send bitcoin without use of the corresponding private keys. In order to send bitcoin when the private keys are kept in cold storage, either the private keys must be retrieved from cold storage and entered into a software program to sign the transaction, or the unsigned transaction must be sent to the "cold" server in which the private keys are held for signature by the private

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48 New York state trust companies are subject to rigorous oversight similar to other types of entities, such as nationally chartered banking entities, that hold customer assets. Like national banks, they must obtain specific approval of their primary regulator for the exercise of their fiduciary powers. Moreover, limited purpose trust companies engaged in the custody of digital assets are subject to even more stringent requirements than national banks which, following initial approval of trust powers, generally can exercise those powers broadly without further approval of the OCC. In contrast, NYDFS requires in their approval orders that limited purpose trust companies obtain separate approval for all material changes in business.

keys. At that point, the Custodian can transfer the bitcoin. The Trust's Transfer Agent will facilitate the settlement of Shares in response to the placement of creation orders and redemption orders from Authorized Participants. The Trust generally does not intend to hold cash or cash equivalents. However, there may be situations where the Trust will hold cash on a temporary basis. The Trust will enter into a cash custody agreement with an unaffiliated regulated bank as custodian of the Trust's cash and cash equivalents.

The Index

The Index is designed to reflect the performance of bitcoin in U.S. dollars. The current exchange composition of the Index is Bitstamp, Coinbase, Gemini, itBit and Kraken. The Index methodology was developed by Fidelity Product Services, LLC (the "Index Provider") and is administered by the Fidelity Index Committee. Coin Metrics, Inc. is the third-party calculation agent for the Index.[49]

The Index is constructed using bitcoin price feeds from eligible bitcoin spot markets and a volume-weighted median price ("VWMP") methodology, calculated every 15 seconds based on VWMP spot market data over rolling 5-minute increments to develop a bitcoin price composite. The Index market value is the volume-weighted median price of bitcoin in U.S. dollars over the previous five minutes, which is calculated by (1) ordering all individual transactions on eligible spot markets over the previous five minutes by price, and then (2) selecting the price associated with the 50th percentile of total volume. Using rolling five-minute segments means malicious actors would need to sustain efforts to manipulate the market over an extended period of time, or such malicious actors would need to replicate efforts multiple times across eligible bitcoin spot

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[49] The Sponsor's affiliates have an ownership interest in Coin Metrics, Inc.

markets, potentially triggering review. This extended period also supports authorized participant activity by capturing volume over a longer time period, rather than forcing authorized participants to mark an individual close or auction. The use of a median price reduces the ability of outlier prices to impact the NAV, as it systematically excludes those prices from the NAV calculation. The use of a volume-weighted median (as opposed to a traditional median) serves as an additional protection against attempts to manipulate the NAV by executing a large number of low-dollar trades, because any manipulation attempt would have to involve a majority of global spot bitcoin volume in a three-minute window to have any influence on the NAV. Further, removing the highest and lowest prices further protects against attempts to manipulate the NAV, requiring bad actors to act on multiple eligible bitcoin spot markets at once to have any ability to influence the price.

Availability of Information

In addition to the price transparency of the Index, the Trust will provide information regarding the Trust's bitcoin holdings as well as additional data regarding the Trust. The Trust will provide an Intraday Indicative Value ("IIV") per Share updated every 15 seconds, as calculated by the Exchange or a third-party financial data provider during the Exchange's Regular Trading Hours (9:30 a.m. to 4:00 p.m. Eastern time). The IIV will be calculated by using the prior day's closing NAV per Share as a base and updating that value during Regular Trading Hours to reflect changes in the value of the Trust's bitcoin holdings during the trading day.

The IIV disseminated during Regular Trading Hours should not be viewed as an actual real-time update of the NAV, which will be calculated only once at the end of each

trading day. The IIV will be widely disseminated on a per Share basis every 15 seconds during the Exchange's Regular Trading Hours by one or more major market data vendors. In addition, the IIV will be available through on-line information services.

The website for the Trust, which will be publicly accessible at no charge, will contain the following information: (a) the current NAV per Share daily and the prior business day's NAV and the reported closing price; (b) the BZX Official Closing Price[50] in relation to the NAV as of the time the NAV is calculated and a calculation of the premium or discount of such price against such NAV; (c) data in chart form displaying the frequency distribution of discounts and premiums of the Official Closing Price against the NAV, within appropriate ranges for each of the four previous calendar quarters (or for the life of the Trust, if shorter); (d) the prospectus; and other applicable quantitative information. The Trust will also disseminate the Trust's holdings on a daily basis on the Trust's website. The value of the Index will be made available by one or more major market data vendors, updated at least every 15 seconds during Regular Trading Hours.

The NAV for the Trust will be calculated by the Administrator once a day and will be disseminated daily to all market participants at the same time. Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the Consolidated Tape Association ("CTA").

Quotation and last sale information for bitcoin is widely disseminated through a variety of major market data vendors, including Bloomberg and Reuters, as well as the

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50 As defined in Rule 11.23(a)(3), the term "BZX Official Closing Price" shall mean the price disseminated to the consolidated tape as the market center closing trade.

Index. Information relating to trading, including price and volume information, in bitcoin is available from major market data vendors and from the exchanges on which bitcoin are traded. Depth of book information is also available from bitcoin exchanges. The normal trading hours for bitcoin exchanges are 24 hours per day, 365 days per year.

Net Asset Value

As described in the Registration Statement, for purposes of calculating the Trust's NAV per Share, the Trust's holdings of bitcoin will be valued using the same methodology as used to calculate the Index. NAV means the total assets of the Trust including, but not limited to, all bitcoin and cash, if any, less total liabilities of the Trust, each determined on the basis of generally accepted accounting principles. The NAV of the Trust is calculated by taking the fair market value of its total assets based on the volume-weighted median price of bitcoin used for the calculation of the Index, subtracting any liabilities (which include accrued expenses), and dividing that total by the total number of outstanding Shares. The Administrator calculates the NAV of the Trust once each Exchange trading day. The NAV for a normal trading day will be released after 4:00 p.m. Eastern time. Trading during the core trading session on the Exchange typically closes at 4:00 p.m. Eastern time. However, NAVs are not officially struck until later in the day (often by 5:30 p.m. Eastern time and almost always by 8:00 p.m. Eastern time). The pause between 4:00 p.m. Eastern time and 5:30 p.m. Eastern time (or later) provides an opportunity to algorithmically detect, flag, investigate, and correct unusual pricing should it occur.

Creation and Redemption of Shares

When the Trust sells or redeems its Shares, it will do so in "in-kind" transactions in blocks of Shares (a "Creation Basket") at the Trust's NAV. Authorized participants will deliver, or facilitate the delivery of, bitcoin to the Trust's account with the Custodian in exchange for Shares when they purchase Shares, and the Trust, through the Custodian, will deliver bitcoin to such authorized participants when they redeem Shares with the Trust. Authorized participants may then offer Shares to the public at prices that depend on various factors, including the supply and demand for Shares, the value of the Trust's assets, and market conditions at the time of a transaction. Shareholders who buy or sell Shares during the day from their broker may do so at a premium or discount relative to the NAV of the Shares of the Trust.

According to the Registration Statement, on any business day, an authorized participant may place an order to create one or more baskets. Purchase orders must be placed by the time noted in the Authorized Participant Agreement or as provided separately to all Authorized Participants. The day on which an order is received is considered the purchase order date. The total deposit of bitcoin required is an amount of bitcoin that is in the same proportion to the total assets of the Trust, net of accrued expenses and other liabilities, on the date the order to purchase is properly received, as the number of Shares to be created under the purchase order is in proportion to the total number of Shares outstanding on the date the order is received. Each night, the Sponsor will publish the amount of bitcoin that will be required in exchange for each creation order. The Administrator determines the required deposit for a given day by dividing the number of bitcoin held by the Trust as of the opening of business on that business day, adjusted for the amount of bitcoin constituting estimated accrued but unpaid fees and

expenses of the Trust as of the opening of business on that business day, by the quotient of the number of Shares outstanding at the opening of business divided by the aggregation of Shares associated with a Creation Basket. The procedures by which an authorized participant can redeem one or more Creation Baskets mirror the procedures for the creation of Creation Baskets.

Standard for Approval of Proposed Rule under the Act

a. Section 6(b)(5) and the Applicable Standards

The Commission has approved numerous series of Trust Issued Receipts,[51] including Commodity-Based Trust Shares,[52] to be listed on U.S. national securities exchanges. In order for any proposed rule change from an exchange to be approved, the Commission must determine that, among other things, the proposal is consistent with the requirements of Section 6(b)(5) of the Act. This more specifically includes (i) the requirement that a national securities exchange's rules are designed to prevent fraudulent and manipulative acts and practices;[53] and (ii) the requirement that an exchange proposal

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51 See Exchange Rule 14.11(f).

52 Commodity-Based Trust Shares, as described in Exchange Rule 14.11(e)(4), are a type of Trust Issued Receipt.

53 As the Exchange has stated in a number of other public documents, it continues to believe that bitcoin is resistant to price manipulation and that "other means to prevent fraudulent and manipulative acts and practices" exist to justify dispensing with the requisite surveillance sharing agreement. The geographically diverse and continuous nature of bitcoin trading render it difficult and prohibitively costly to manipulate the price of bitcoin. The fragmentation across bitcoin platforms, the relatively slow speed of transactions, and the capital necessary to maintain a significant presence on each trading platform make manipulation of bitcoin prices through continuous trading activity challenging. To the extent that there are bitcoin exchanges engaged in or allowing wash trading or other activity intended to manipulate the price of bitcoin on other markets, such pricing does not normally impact prices on other exchange because participants will generally ignore markets with quotes that they deem non-executable. Moreover, the linkage between the bitcoin markets and the presence of arbitrageurs in those markets

be designed, in general, to protect investors and the public interest. In order to meet this standard in a proposal to list and trade a series of Commodity-Based Trust Shares, the Commission requires that an exchange demonstrate that there is a comprehensive surveillance-sharing agreement in place[54] with a regulated market of significant size. Specifically, the Commission has previously stated that:

> when the spot market is unregulated – the requirement of preventing fraudulent and manipulative acts may possibly be satisfied by showing that the ETP listing market has entered into a surveillance-sharing agreement with a regulated market of significant size in derivatives related to the underlying asset. That is because, where a market of significant size exists with respect to derivatives on the asset underlying the commodity-trust ETP, the Commission believes that there is a reasonable likelihood that a person attempting to manipulate the ETP by manipulating the underlying spot market would also have to trade in the derivatives market in order to succeed, since arbitrage between the derivative and spot

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> means that the manipulation of the price of bitcoin price on any single venue would require manipulation of the global bitcoin price in order to be effective. Arbitrageurs must have funds distributed across multiple trading platforms in order to take advantage of temporary price dislocations, thereby making it unlikely that there will be strong concentration of funds on any particular bitcoin exchange or OTC platform. As a result, the potential for manipulation on a trading platform would require overcoming the liquidity supply of such arbitrageurs who are effectively eliminating any cross-market pricing differences.

54 As previously articulated by the Commission, "The standard requires such surveillance sharing agreements since "they provide a necessary deterrent to manipulation because they facilitate the availability of information needed to fully investigate a manipulation if it were to occur." The Commission has emphasized that it is essential for an exchange listing a derivative securities product to enter into a surveillance- sharing agreement with markets trading underlying securities for the listing exchange to have the ability to obtain information necessary to detect, investigate, and deter fraud and market manipulation, as well as violations of exchange rules and applicable federal securities laws and rules. The hallmarks of a surveillance-sharing agreement are that the agreement provides for the sharing of information about market trading activity, clearing activity, and customer identity; that the parties to the agreement have reasonable ability to obtain access to and produce requested information; and that no existing rules, laws, or practices would impede one party to the agreement from obtaining this information from, or producing it to, the other party." The Commission has historically held that joint membership in ISG constitutes such a surveillance sharing agreement. See Wilshire Phoenix Disapproval.

> markets would tend to counter an attempt to manipulate the spot market alone. [55]

The Commission has provided illustrative guidance in interpreting the terms "significant market" and "market of significant size" to include "a market (or group of markets) as to which (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 a surveillance-sharing agreement would assist the ETP listing market 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."[56]

The Commission has stated in a prior disapproval order that "the lead-lag relationship between the bitcoin futures market and the spot market…is central to understanding whether it is reasonably likely that a would-be manipulator of the ETP would need to trade on the bitcoin futures market to successfully manipulate prices on those spot platforms that feed into the proposed ETP's pricing mechanism."[57] The Commission further noted that "in particular, if the spot market leads the futures market, this would indicate that it would not be necessary to trade on the futures market to manipulate the proposed ETP, even if arbitrage worked efficiently, because the futures price would move to meet the spot price."[58]

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55 See Winklevoss Order at 37579 and 37600.

56 Id.

57 See Securities Exchange Act Release No. 87267 (October 9, 2019) 84 FR 55382 (October 16, 2019) (SR-NYSEArca-2019-01) at 55411 (Order Disapproving a Proposed Rule Change, as Modified by Amendment No. 1, Relating to the Listing and Trading of Shares of the Bitwise Bitcoin ETF Trust Under NYSE Arca Rule 8.201-E).

58 Id.

The Exchange and Sponsor both believe that this proposal is consistent with the requirements of Section 6(b)(5) of the Act and that the Sponsor's analysis demonstrates that the Exchange can meet such requirements in that the CME Bitcoin Futures Market (i) is a regulated market; (ii) has a comprehensive surveillance-sharing agreement with the Exchange; and (iii) satisfies the Commission's "significant market" definition."

b. The CME Bitcoin Futures Market is a Regulated Market and ISG Member

The CME is regulated by the CFTC and is a member of the Intermarket Surveillance Group ("ISG"), which was established to provide a framework for sharing information and coordinating regulatory efforts among exchanges trading securities and related products and to address potential intermarket manipulations and trading abuses. The Commission has previously stated that membership by a regulated futures exchange in ISG is sufficient to meet the surveillance-sharing requirement.[59] Both the Exchange and CME are members of the ISG.

c. The CME Bitcoin Futures Market is a Market of Significant Size

Based on the Commission's prior guidance, Sponsor conducted a detailed price discovery study through its lead-lag analysis of bitcoin spot and futures trading across markets located globally. As discussed below, Sponsor's analysis concludes that the CME Bitcoin Futures market is consistently the leading market for price discovery across USD bitcoin markets located globally, including bitcoin spot markets and offshore, unregulated bitcoin futures markets. Thus, Sponsor's analysis supports the conclusion

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[59] See Winklevoss Order at 37594.

that there is a reasonable likelihood that a person attempting to manipulate the Shares would also have to trade on the CME Bitcoin Futures market to manipulate the Trust. Sponsor also conducted an additional lead lag analysis including data from a recently launched CME Bitcoin Futures-based ETF to evaluate the likelihood of whether trading in the Trust could become the predominant influence on prices in the CME Bitcoin Futures market and concluded that it is unlikely that trading in the Trust would be the predominant influence on prices in the CME Bitcoin Futures market.

Sponsor's methodology for analyzing price discovery in the Bitcoin spot and futures markets is described below.

Research Design

Price discovery between spot and futures markets plays an important role in financial research due to its association with market maturity. In theory, the futures market is expected to lead price discovery in established asset classes due to its inherent features, such as lower transaction fees, built-in leverage, unconstrained short-selling, and greater transparency.

Since CME Bitcoin Futures contracts began trading on regulated exchanges in December 2017, several academic and market research papers have studied spot-futures price discovery in bitcoin markets. Sponsor has reviewed these papers and summarizes them below in Table 1. The conclusions from these papers are mixed as to which markets lead or lag in price discovery. Sponsor noted that each of the studies reviewed used metrics derived from the Vector Error Correction Model (VECM) or an extension of

VECM to examine price discovery. These metrics, such as the Information Share (IS)[60], and the Component Share (CS)[61], provide great insights into understanding pricing dynamics, but face difficulties based on model assumptions of VECM when the prices under consideration are non-synchronous and/or infrequent. Buccheri (2021)[62] discussed the limitations for VECM derived metrics and noted that when price observations are sparse, a lot of zero returns are produced through imputation; therefore, the time series of prices strongly deviate from the standard semi-martingale assumption and sample covariances can be downward biased. The authors in Buccheri (2021) conclude that when the prices have a high level of sparsity, the VECM is clearly mis-specified and the estimates are potentially biased. This conclusion in Buccheri (2021) confirms Sponsor's

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60 Hasbrouck, Joel. "One security, many markets: Determining the contributions to price discovery." *The journal of Finance* 50, no. 4 (1995): 1175-1199. https://doi.org/10.2307/2329348. This study proposed the information share metric and employed a VECM to measure the contribution of a price series to price discovery. The study provides great insights on the response of one market to innovations in a common level but has limitations when used with non-synchronous and/or infrequent input data based on the assumptions of the VECM.

61 Gonzalo, Jesus, and Clive Granger. "Estimation of common long-memory components in cointegrated systems." *Journal of Business & Economic Statistics* 13, no. 1 (1995): 27-35. https://doi.org/10.2307/1392518. This study proposes a method of decomposing the price variables into a permanent component and a transitory component using the VECM. One of the most popular metrics in price discovery research, CS, was created on the foundation of this work. It provides great insights into markets' responses to transitory frictions but has limitations when used with non-synchronous and/or infrequent input data based on the assumptions of the VECM.

62 Buccheri, Giuseppe, Giacomo Bormetti, Fulvio Corsi, and Fabrizio Lillo. "Comment on: Price discovery in high resolution." *Journal of Financial Econometrics* 19, no. 3 (2021): 439-451. https://doi.org/10.1093/jjfinec/nbz008. The authors comment on the limitations of using information share within markets with trades on high resolution frequencies. The paper illustrates why the application of a VECM methodology like information share would be mis-specified and the OLS estimates could be biased because of high sparsity in the data.

observation that IS is sensitive to the level of sparsity within CME Bitcoin Futures data and explains why prior research conclusions are mixed on whether the CME Bitcoin Futures market leads or bitcoin spot market leads. Due to the high sparsity of CME Bitcoin Futures data, the Sponsor attributes the "mixed results" in previous academic studies that have failed to demonstrate that the CME Bitcoin Futures market constitutes a market of significant size to the problems associated with VECM and imputation. The Sponsor's analysis accounts for the characteristics of CME's trading data by applying the Hayashi-Yoshida (HY) estimator within a lead-lag framework.

Table 1: Previous bitcoin spot/futures price discovery research

Author	Article Name (Year)	Journal	Metrics	Data Range	Frequency Level	Conclusion
Corbet, et al.	Bitcoin Futures - What use are they? (2018)	Economics Letters	Information Share, Component Share, Information Leadership Share (Yan) Information Leadership Share (Putnins)	09/26/2017 - 02/22/2018	Minute	finding that the bitcoin spot market leads price discovery
Kapar and Olmo	An analysis of price discovery between Bitcoin futures and spot markets (2018)	Economics Letters	Information Share, Component Share	12/12/2017 - 05/16/2018	Daily	finding that the bitcoin futures market leads price discovery
Baur and Dimpfl	Price Discovery in Bitcoin Spot or Futures? (2019)	Journal of Futures Markets	Information Share, Component Share	12/10/2017 - 10/18/2018	15-Minute	finding that the bitcoin spot market leads price discovery
Hu, et al.	What role do futures markets play in Bitcoin pricing? Causality, cointegration and price discovery from a time-varying perspective (2019)	International Review of Financial Analysis	Time-varying version of Information Share and Generalized information Share	12/18/2017 - 06/16/2019	Daily	finding that the bitcoin futures market leads price discovery
Alexander and Heck	Price discovery, high-frequency trading and jumps in bitcoin markets (2019)	Available at SSRN: https://ssrn.com/abstract=3383147	Generalized Information Share, Component Share	12/18/2017 - 06/30/2019	30-Minute	finding that the bitcoin futures market leads price discovery
Fassas, et al.	Price Discovery in Bitcoin Futures (2020)	Research in International Business and Finance	Common Factor Weight, Information Share, Component Share, Information Leadership Share (Putnins)	01/01/2018 - 12/31/2018	Hourly	finding that bitcoin futures play a more important role in price discovery
Entrop, et al.	The determinants of price discovery on bitcoin markets (2020)	Journal of Futures Markets	Information Share, Component Share	12/17/2017 - 03/31/2019	Minute	finding that price discovery measures vary significantly over time without one market being clearly dominant over the other

Akyildirim, et al.	The development of Bitcoin futures: Exploring the interactions between cryptocurrency derivatives (2020)	Finance Research Letters	Information Share, Component Share, Information Leadership Share (Yan) Information Leadership Share (Putnins)	12/18/2017 - 02/26/2018	Minute	finding that futures dominate price discovery relative to spot market, and CBOE futures are found to be the lead source compared to CME
Alexander, et al.	Price Discovery in Bitcoin: The Impact of Unregulated Markets (2020)	Journal of Financial Stability	Generalized Information Share	04/01/2019 - 01/30/2020	Minute	finding that, in a multi-dimensional setting, including the main price leaders within futures, perpetuals, and spot markets, CME bitcoin futures have a very minor effect on price discovery and that faster speed of adjustment and information absorption occurs on the unregulated spot and derivatives platforms than on CME bitcoin futures
Aleti and Mizrach	Bitcoin spot and futures market microstructure (2020)	Journal of Futures Markets	Information Share, Component Share	01/02/2019 - 02/28/2019	5-Minute	finding that relatively more price discovery occurs on CME as compared to four spot exchanges
Chang, et al.	Efficient price discovery in the bitcoin markets (2020)	Available at SSRN: https://ssrn.com/abstract=3733924	Component Share	07/01/2019 - 12/31/2019	Minute	finding that CME bitcoin futures dominate price discovery
Hung, et al.	Trading activity and price discovery in Bitcoin futures markets (2021)	Journal of Empirical Finance	Modified Information Share	12/26/2017 - 04/30/2019	15-Minute	finding that the bitcoin spot market dominates price discovery
Wu, et al.	Fractional cointegration in bitcoin spot and futures markets (2021)	Journal of Futures Markets	Fractional Version of Component Share	12/18/2017 - 7/31/2020	Minute	finding that CME bitcoin futures dominate price discovery

The Sponsor believes the framework of correlation-based lead-lag analysis using the Hayashi-Yoshida (HY) estimator[63] to compute correlation and its extension by other

63 Hayashi, Takaki, and Nakahiro Yoshida. "On covariance estimation of non-synchronously observed diffusion processes." *Bernoulli* 11, no. 2 (2005): 359-379. http://www.jstor.org/stable/3318933. The authors proposed a novel method (HY estimator) of estimating the covariance of two diffusion processes when they are observed only at discrete times in a non-synchronous manner. This methodology addresses the issue that the traditional realized covariance estimator encounters, which is that the choice of regular interval size and data interpolation scheme can lead to unreliable estimation. The new method Hayashi and Yoshida introduced in this paper is free from any interpolation and therefore avoids the bias and other problems caused by it.

academic researchers, including Hoffman (2013)[64], to obtain the lead-lag information is more suitable. This approach is free from any imputation or sampling for non-synchronous and/or infrequent data and has proven useful in price discovery research in other markets. Huth (2011)[65] studied high-frequency lead-lag relationships in the French equity market using the Hayashi-Yoshida estimator and proposed a measurement, lead-lag ratio, for calculating the relative strength of the lead-lag relationships. Sponsor applied this lead-lag ratio in its analysis of the global bitcoin spot and futures markets. Dao (2018)[66] applied the Hayashi-Yoshida estimator in a lead-lag framework on the S&P 500 index and the two most liquid ETFs that track it. This academic study is the first to analyze the effect of information arrival on the lead-lag relationship among related spot instruments and concludes that sophisticated investors have a more significant effect on the lead-lag relationship. The analysis from this study confirms that using the Hayashi-Yoshida estimator in a lead-lag framework is suitable for analyzing non-synchronous tick-level data. Sponsor notes that there is academic research studying high-frequency lead-lag relationships between multiple bitcoin spot markets with Hayashi-Yoshida

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[64] Hoffmann, Marc, Mathieu Rosenbaum, and Nakahiro Yoshida. "Estimation of the lead-lag parameter from non-synchronous data." *Bernoulli* 19, no. 2 (2013): 426-461. http://www.jstor.org/stable/23525731. The authors propose a methodology for modeling the lead-lag effect between two financial assets with non-synchronous data based on Hayashi and Yoshida's work (2015). It has been applied in various price discovery research publications. The Sponsor's analysis utilized this methodology to obtain pairwise lead-lag seconds between two markets.

[65] Huth, Nicolas, and Frédéric Abergel. "High frequency lead/lag relationships—empirical facts." *Journal of Empirical Finance* 26 (2014): 41-58. https://doi.org/10.1016/j.jempfin.2014.01.003.

[66] Dao, Thong Minh, Frank McGroarty, and Andrew Urquhart. "Ultra-high-frequency lead–lag relationship and information arrival." *Quantitative Finance* 18, no. 5 (2018): 725-735. https://doi.org/10.1080/14697688.2017.1414484.

estimator and analyze how information arrival affects these relationships from *Schei (2019)*[67]. Sponsor's analysis expands this research by using the Hayashi-Yoshida estimator with a lead-lag framework on bitcoin spot and futures markets and explains why this methodology is more suitable based on the characteristics of CME Bitcoin Futures market data. Sponsor's study focused on exploring the information flow using the HY estimator not only within bitcoin spot markets, but also including bitcoin futures markets globally.

Data Description and Sources

Sponsor obtained tick level trade data for Bitcoin spot prices and futures prices used in its analysis from Coin Metrics for the period spanning from January 1, 2019 to March 31, 2021. Table 2 summarizes the dataset by exchange, market type, and quote currency. Due to the size of the dataset, Sponsor aggregated the tick level trades to the one second floor level using a volume weighted average price (VWAP) approach. Using the smallest sampling frequency possible and allowing the data to stay non-synchronous is important to this study. Compared to the daily/minute frequency, the second level data can capture more intra-day price dynamics and the HY estimator with lead-lag framework can be utilized without artificial interpolation or synchronous resampling.

In order to exclude any impacts caused by exchange rate movements, Sponsor limited the dataset to BTC-USD and BTC-USDT trades. Markets with an average correlation lower than 0.1 to other bitcoin markets, in any given quarter, were removed from the analysis. For futures markets, Sponsor included both ordinary futures and

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67 Schei, Norheim Schei. "High Frequency Lead-Lag Relationships in the Bitcoin Market." (unpublished master's thesis, 2019). Copenhagen Business School, Copenhagen, Denmark.

perpetuals. Contract frequencies were validated and recorded via respective exchange websites and, for CME data, the sponsor compared data from the exchange directly with data provided by Coin Metrics to verify accuracy.

Within the ordinary futures market, one exchange, quote and contract lifespan combination can often have same-day trading on contracts with different expiration dates. To remove price gaps in this market, Sponsor constructed a continuous time-series of prices by choosing the contract with the highest volume per day within an exchange, quote, and contract lifespan combination. For each combination, successive contracts are backwards adjusted using the price difference between the two contracts at the time of rollover.

Table 2 Summary of Instruments

	Spot		Ordinary Futures[68]		Perpetual Futures	
Exchange	**USD**	**USDT**	**USD**	**USDT**	**USD**	**USDT**
Binance		✓	✓	✓	✓	✓
Binance.US	✓					
Bitfinex	✓	✓				✓
bitFlyer	✓					
BitMEX			✓		✓	
Bitstamp	✓					
Bittrex	✓					
Bybit					✓	✓
CEX.IO	✓					
CME			✓			
Coinbase	✓					
Deribit			✓		✓	
FTX	✓		✓		✓	
Gemini	✓					
HitBTC		✓				
Huobi		✓	✓		✓	✓
itBit	✓					
Kraken	✓	✓	✓		✓	
LBank		✓				
Liquid	✓					
OKEx		✓	✓	✓	✓	✓
ZB.COM		✓				

Legend: **CME Bitcoin Futures** | **USD Spot** | **USDT Spot** | **USD Futures** *(Excluding CME)* | **USDT Futures** | **USD Perpetual Futures** | **USDT Perpetual Futures**

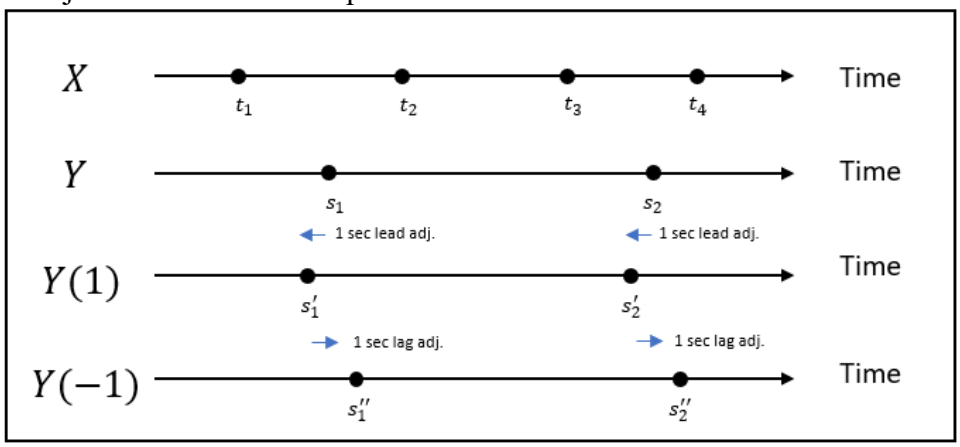
In the lead-lag analysis, Sponsor examined the pairwise lead-lag relationship within the spot market and futures market, as well as across them. For each pair, Sponsor computed the correlation coefficients using the HY estimator between one market price time series and a second market price time series as well as timestamp-adjusted (leading/lagging) versions of the second market to find the time delta that maximizes their correlation. The range of time deltas is from – N seconds to N seconds in one

68 One exchange with the same market type and quote currency can have multiple ordinary futures contracts with different expiration cycles/lifespans.

second increments. In the Sponsor's analysis, the parameter N is set as 15. For illustration below, Sponsor uses the pair of CME USD Futures (denoted as price time series X) and Coinbase USD Spot (denoted as price time series Y) as an example to describe the process.

Step 1: Fix the timestamp of CME and adjust the timestamps of Coinbase from N seconds lagging to N seconds leading. Figure 1 shows this process with time deltas equal to 1 and -1 for illustration purpose.

Figure 1: Adjustment of Timestamps



Notes: Each dot is a price observation; t_i and s_j are the observation timestamps of X and Y; $Y(1)$ and $Y(-1)$ are timestamp adjusted price time series with 1 second backward shift and 1 second forward shift respectively.

Step 2: Compute the correlation coefficients between CME price time series and each of timestamp-adjusted time series of Coinbase with l seconds ($l \in [-N, N]$) lead/lag using HY estimator. The correlation coefficient is defined as (Hayashi & Yoshida 2005):

$$\hat{\rho} = \frac{\sum_{i,j} r_X^i r_Y^j \mathbb{I}_{\{O_{ij} \neq \emptyset\}}}{\sqrt{\sum_i (r_X^i)^2 \sum_j (r_Y^j)^2}},$$

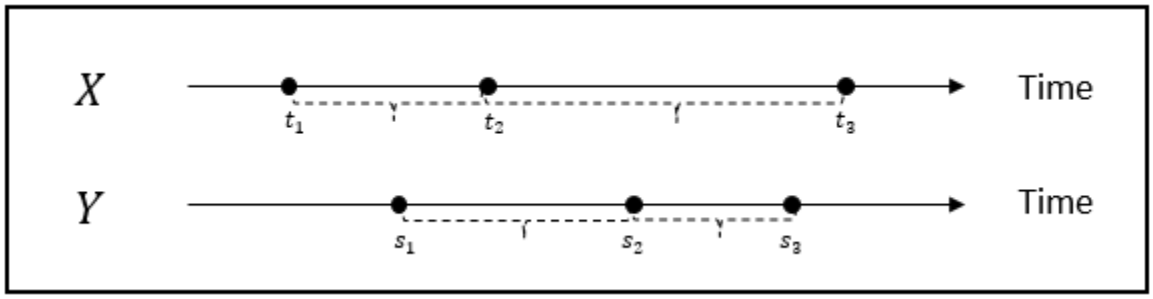
where

- X and Y are trade prices on two different markets
- $r_X^i = X_{t_i} - X_{t_{i-1}}$ and t_i is the i_{th} observed time of X

- $r_Y^j = Y_{s_j} - Y_{s_{j-1}}$ and s_j is the j_{th} observed time of Y
- The observed times, t_i and s_j for X and Y are independent
- O_{ij} is the overlapping time between interval (t_{i-1}, t_i) and interval (s_{i-1}, s_i)
- $\mathbb{I}$ is defined as an indicator function, $\mathbb{I} = \begin{cases} 1, & O_{ij} \neq \emptyset \\ 0, & O_{ij} = \emptyset \end{cases}$.

The numerator of $\hat{\rho}$ is the covariance between CME and Coinbase, which equates to the sum pf every product of price changes that share a time overlap. Figure 2 shows this process with a simple example.

Figure 2: Data Points Used in HY Estimator



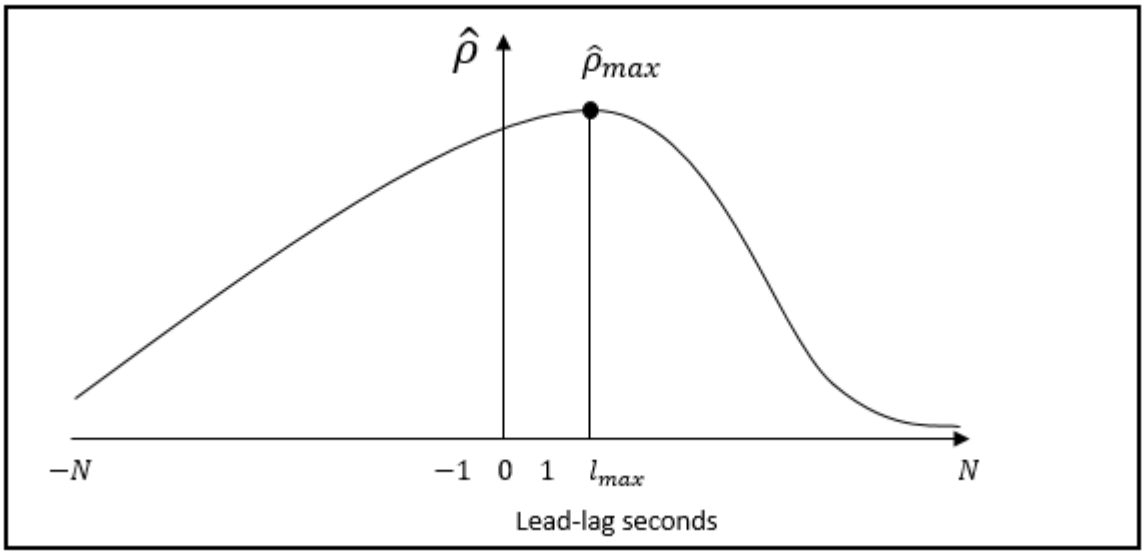
Notes: The interval (t_1, t_2) is overlapped with the interval (s_1, s_2), and the interval (t_2, t_3) is overlapped with both of the interval (s_1, s_2) and the interval (s_2, s_3). Therefore, the covariance is calculated by summing the products of the following pairs of price changes: $(X_{t_2} - X_{t_1}, Y_{s_2} - Y_{s_1})$, $(X_{t_3} - X_{t_2}, Y_{s_2} - Y_{s_1})$, and $(X_{t_3} - X_{t_2}, Y_{s_3} - Y_{s_2})$.

Step 3: Collect the correlation coefficients with different lead-lag seconds as a correlation curve and search for the value l_{max} from $-N$ to N that maximizes their correlation. Meanwhile, compute the lead-lag ratio between CME and Coinbase, llr, to measure the strength of the lead-lag relationship (Huth & Abergel 2012). It is defined as

$$llr = \frac{\sum_{i=1}^{N} \hat{\rho}^2(l_i)}{\sum_{i=1}^{N} \hat{\rho}^2(-l_i)}.$$

If $llr \in [0.95, 1.05]$ or l_{max} is zero, we conclude neither market leads. If llr is not in the range $[0.95, 1.05]$ and l_{max} is positive, CME leads Coinbase by l_{max} seconds and vice versa. Figure 3 shows an example of the correlation curve.

Figure 3: Example of the Correlation Curve



Notes: The l_{max} is the lead-lag seconds, and $\hat{\rho}_{max}$ is the corresponding maximum HY correlation.

These three steps provide the pairwise lead-lag seconds between two markets. To measure a market's overall price discovery leadership, the results are aggregated by taking the average lead-lag seconds it has with all other markets included in a quarter.

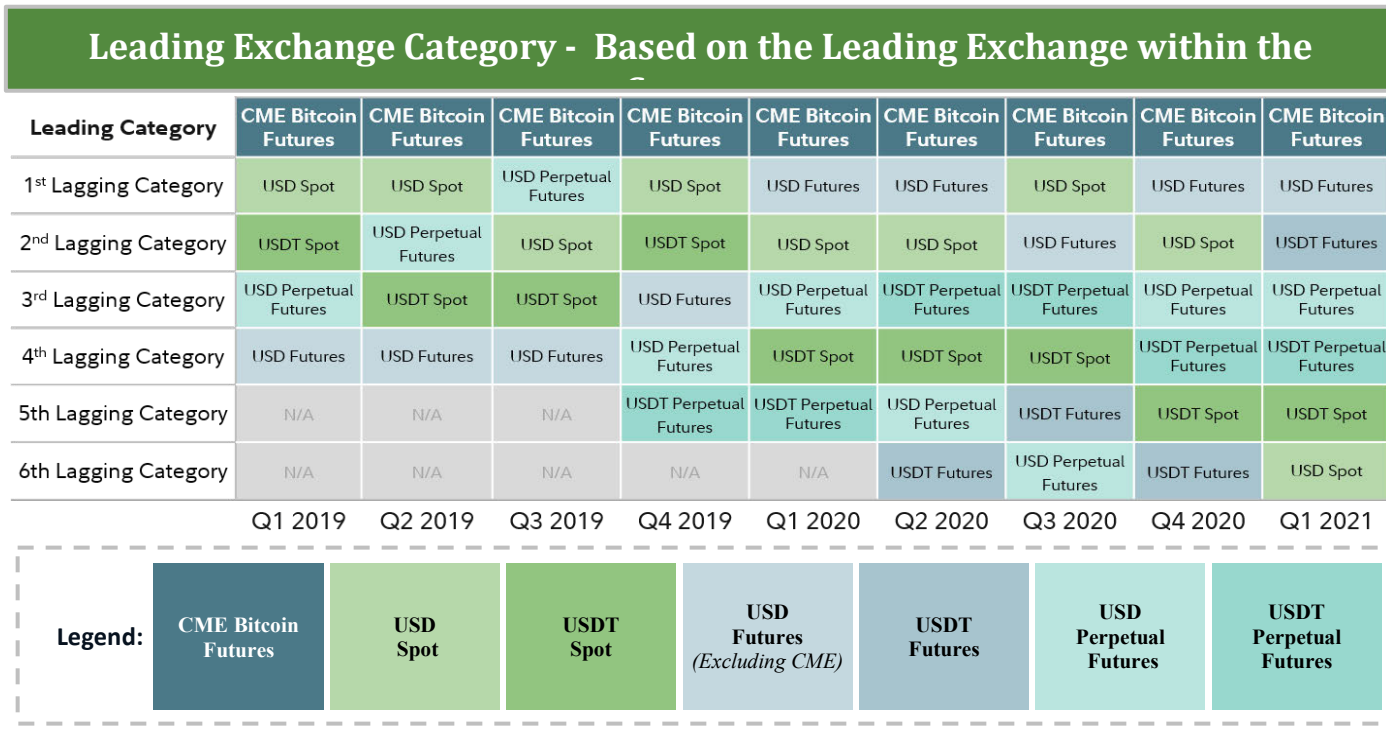
d. Conclusion of Reasonable Likelihood – Lead Lag Analysis

The Sponsor's results suggest that, out of the 20 spot markets and 26 futures markets analyzed, the CME Bitcoin Futures market plays the most important role in price discovery during each quarter spanning from the first quarter of 2019 to the first quarter of 2021. The respective empirical results are reported in Figure 4 and show that, while other category leaders can change rank each quarter, they consistently rank below CME futures in average seconds leading. This consistency, along with the Sponsor's inclusion standards of strict overall average market correlations and demonstrative lead-lag ratios,

speaks to the strength of CME futures' leadership across spot and futures markets globally. [69]

[69] For more information, see Memorandum from the Division of Trading and Markets regarding a September 8, 2021 meeting with representatives from Fidelity Digital Assets, et al. (Sept. 8, 2021) *available at* https://www.sec.gov/comments/sr-cboebzx-2021-039/srcboebzx2021039-250110.pdf.

Figure 4: Leading Market Category – Based on the Leading Market within each Category

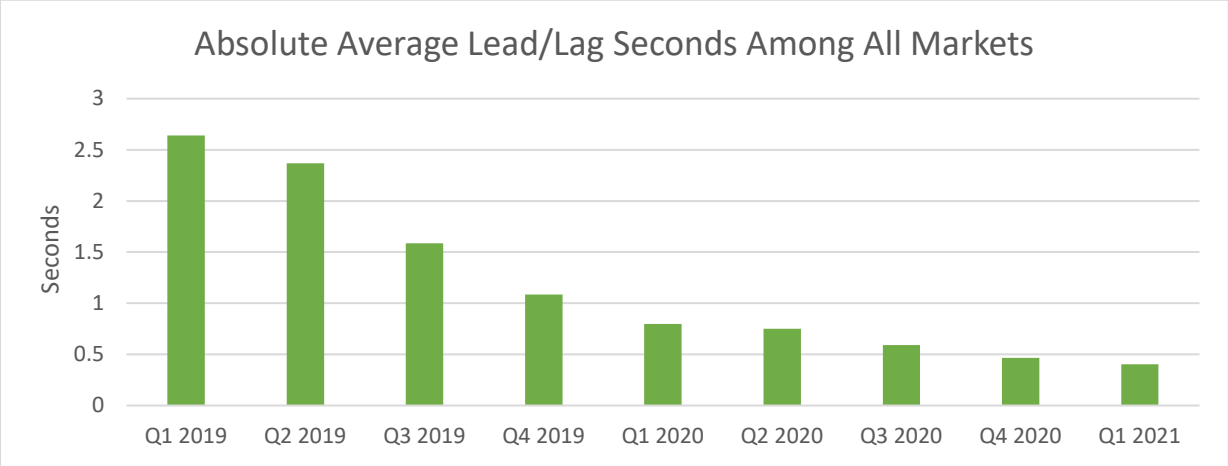


The lead-lag relationships between and among bitcoin futures and spot markets provide insights into the directional influences of markets on price discovery, with the CME Bitcoin Futures market playing the most important role in price discovery during each quarter spanning from the first quarter of 2019 to the first quarter of 2021, as noted above. Arbitrage between the CME Bitcoin Futures market and spot markets would tend to counter an attempt to manipulate the spot market alone. Thus, the Sponsor's analysis supports the conclusion that there is a reasonable likelihood that a person attempting to manipulate the Shares would also have to trade on the CME Bitcoin Futures market to manipulate the ETP.

Figure 5 shows that the absolute average of every market's overall lead-lag seconds (average lead-lag seconds over all other markets) has steadily decreased from the first quarter of 2019 to the first quarter of 2021. This suggests that the efficiency within

bitcoin markets has continued to improve and the window of arbitrage opportunity has closed with increasing speed.

Figure 5: Absolute Average Lead/Lag Seconds Among All Markets



Although overall market efficiency has continued to improve, the strength of CME Bitcoin Futures leadership has not deteriorated. This can be measured by observing the ratio of CME Bitcoin Futures' average lead among all markets over the absolute average of every market's overall lead-lag seconds as seen in figure 6.

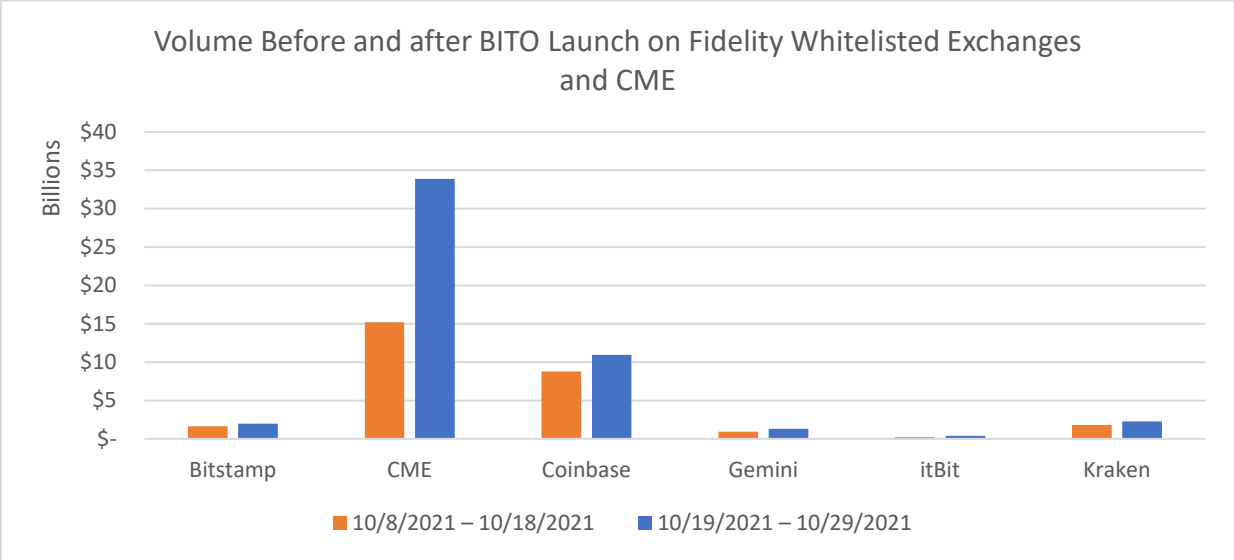
Figure 6: Strength of CME Leadership Relative to All Markets' Average Lead/Lag

e. *Conclusion of Unlikelihood for Trust to be Predominant Influence on Prices in CME Bitcoin Futures Market*

As described above, the Commission requires the Exchange to establish that it is unlikely that trading in the Shares would become the predominant influence on prices in the CME Bitcoin Futures market. In considering this question, Sponsor conducted a lead-lag analysis to evaluate the effect of a new market (specifically an ETP) entering with high trade activity. Sponsor used trade data from a recently launched CME Bitcoin Futures-based ETF in its analysis. Sponsor selected the ProShares Bitcoin Strategy ETF ("BITO") for its analysis as BITO is a Commission-registered ETF that is listed and traded on a US regulated national securities exchange and was launched on October 18, 2021. As described in its prospectus, BITO seeks to invest primarily in CME Bitcoin Futures contracts. Sponsor's analysis concluded that trading in the proposed ETP would not be the predominant influence on prices in the CME Bitcoin Futures market.

Sponsor obtained tick level data from Coin Metrics for all markets included in the lead-lag analysis described above spanning two specific periods: 11 days before the launch of BITO (10/8/2021 – 10/18/2021) and 11 days after the launch (10/19/2021 – 10/29/2021). For the 11 days after the launch of BITO, Sponsor obtained tick-level trade data on BITO via Bloomberg and aggregated to the one second floor level using the same method described above. Sponsor selected these two periods to represent a period of new information and heightened trading activity in the CME Bitcoin Futures market as seen from Figure 7.

Figure 7: Volume Comparison Before and After BITO Launch on Fidelity Whitelisted Exchanges and CME

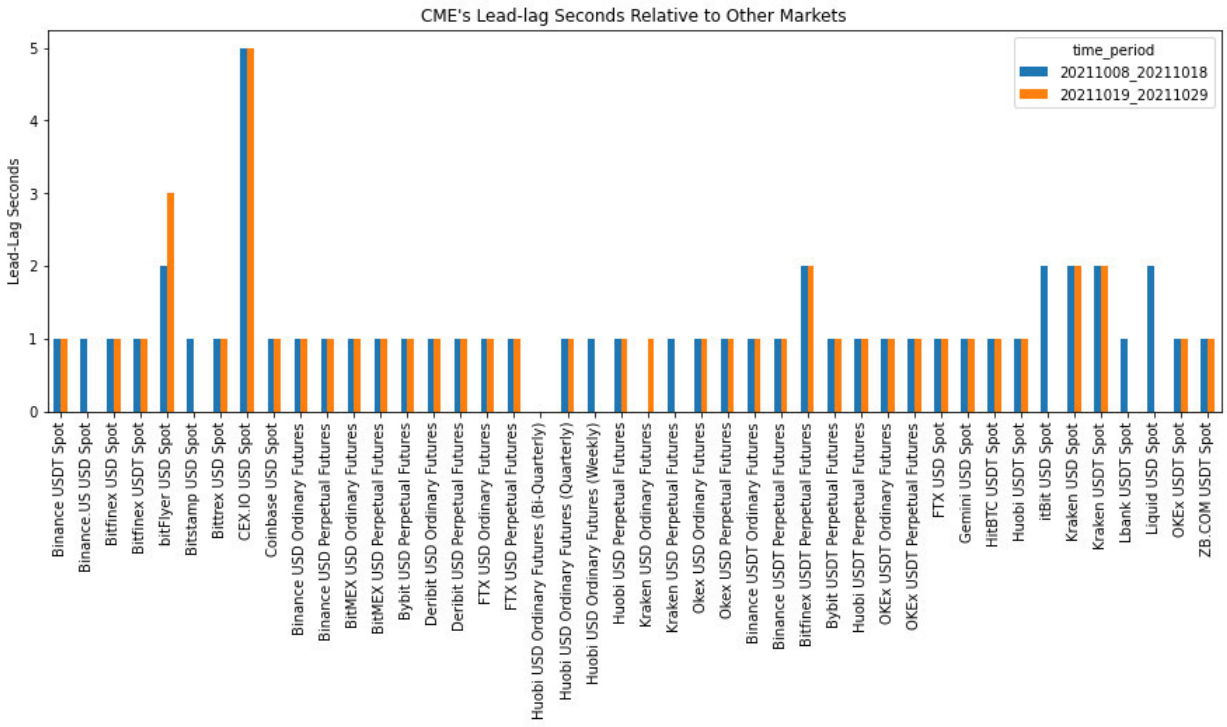


Sponsor examined the pairwise lead-lag relationship between CME Bitcoin Futures and all other markets included. For each pair, Sponsor computed the correlation coefficients using the same lead-lag framework and HY estimator between CME Bitcoin Futures and the second market price time series as well as timestamp-adjusted (leading/lagging) versions of the second market to find the time delta that maximized their correlation. The only differences between Sponsor's shortened analysis and the quarterly analysis spanning Q1 2019 through Q1 2021 are the timeframes and a stricter average correlation threshold (.2 instead of .1) in the former analysis given the shorter timeframe.

The results of this analysis in Figure 8 show the CME Bitcoin Futures market leading all markets for the period of 11 days prior to the launch of BITO. This price discovery leadership overall does not become stronger or weaker after BITO's launch in

the period of 10/19/2021 to 10/29/2021 even though the trading volume was increased significantly.[70]

Figure 8: CME's Lead-lag Seconds Relative to Other Market Before and After BITO's Launch



Given that the CME Bitcoin Futures market did not see an increase in price discovery leadership during a period of heightened activity on that market, Sponsor believes it would be unreasonable to assume that that level of leadership would deteriorate due to heightened trade activity in the spot market.

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70 Futures with much smaller trading volumes compared to the underlying spot market can still dominate price discovery. See Hauptfleisch, Martin, Tālis J. Putniņš, and Brian Lucey. "Who sets the price of gold? London or New York." *Journal of Futures Markets* 36, no. 6 (2016): 564-586. https://doi.org/10.1002/fut.21775 for more information.

Sponsor also believes that there will be no material effect of the Shares' trade prices on CME Bitcoin Futures prices. To estimate this effect, using BITO is the first ETP launched in US, it is reasonable to consider it as a general ETP example. Sponsor examined the pairwise lead-lag relationship between BITO and all other markets included in previous analysis. As seen in Table 2, only four markets have a lead-lag ratio (the strength measurement of the lead-lag relationship) outside the range of $[0.95, 1.05]$ and non-zero lead-lag seconds to conclude they are leading or lagging. Sponsor interprets this result as BITO's lead-lag relationship with other bitcoin markets is not significant. Regarding BITO's price discovery contribution measured by lead-lag seconds, it does not lead any bitcoin markets except CEX.IO USD spot market, which not only lags BITO but also lags all other bitcoin markets.

Table 2: Markets with significant lead/lag relationships to BITO

	BITO Leadership (Lead-lag Seconds)	Lead-Lag Ratio
CME USD Ordinary Futures	-1	0.909
Kraken USD Ordinary Futures	-1	0.926
Huobi USD Ordinary Futures (Bi-Quarterly)	-1	0.933
CEX.IO USD Spot	12	1.067

From the results of this analysis, Sponsor believes that BITO as a general bitcoin ETP example only has a minor impact to price discovery in the bitcoin markets.

The gold market shares certain characteristics with the bitcoin market – both gold and bitcoin have a finite supply, are traded globally in various market venues against various currency pairs and have a robust futures market. In addition, many investors view

bitcoin as a form of digital gold and in looking to determine the potential impact of price discovery in trading in the ETP shares on the secondary market, the Sponsor looks to the gold market as an analogous market to bitcoin when looking to determine the impact of price discovery. According to a previous study[71] the Sponsor reviewed, the authors analyzed intraday data on gold prices from 1997-2014 and concluded that futures markets tend to lead price discovery in the gold market despite the spot market having ten times more volume than the US futures market. A second study[72] that the sponsor analyzed, came to the same conclusion that futures are the global leader in price discovery for gold, with a growing influence of ETPs.

Further, Sponsor believes that Shares of the Trust trading on the secondary market could have a positive impact on the CME Bitcoin Futures market leading position. Sponsor believes this due to the use of CME Bitcoin Futures in hedging activities by market participants. One such example, is when Authorized Participants transact on both the secondary and primary markets. In order to arbitrage or fulfill large basket trades on behalf of clients, Authorized Participants may transact in the primary market with the ETP by creating and/or redeeming and then immediately offsetting that transaction in the secondary market. Because the primary market is settled in-kind (meaning the exchange of shares and bitcoin) and the secondary market is settled in cash (meaning the exchange of shares and fiat currency), the Authorized Participant needs to transact in the bitcoin spot market. Given there is a lag between the secondary market transaction, the striking

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71 See Hauptfleisch, et. al.

72 Sehgal, Sanjay, Neharika Sobti, and Florent Diesting. "Who leads in intraday gold price discovery and volatility connectedness: Spot, futures, or exchange-traded fund?" *Journal of Futures Markets* 41, no. 7 (2021): 1092-1123. https://doi.org/10.1002/fut.22208.

of the NAV per Share in the primary market and the settlement of the primary market transaction, the Authorized Participants will look to hedge their exposure to the bitcoin market through the use of bitcoin futures. For the reasons discussed throughout this document such as the transparency, low fees, and leverage capabilities, many market participants look to hedge themselves using futures and Sponsor believes that will be the case with Authorized Participant transactions in respect of the Trust as well.

The Exchange also believes that trading in the Shares would not be the predominant force on prices in the bitcoin futures market (or spot market) for a number of additional reasons, including the significant volume in the bitcoin futures market, the size of bitcoin's market cap (approximately $1 trillion), and the significant liquidity available in the spot market. According to the Sponsor's analysis, in the second quarter of 2021, bitcoin futures volume greatly exceeded volumes in the spot markets. The volume of the bitcoin futures market was approximately $7.1 trillion where the volume of the bitcoin spot markets was approximately $1.4 trillion.[73] In addition to the bitcoin futures market data points cited above, the spot market for bitcoin is also very liquid. According to data from CoinRoutes from February 2021, the cost to buy or sell $5 million worth of bitcoin averages roughly 10 basis points with a market impact of 30 basis points.[74] For a $10 million market order, the cost to buy or sell is roughly 20 basis

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73 For more information, see Memorandum from the Division of Trading and Markets regarding a September 8, 2021 meeting with representatives from Fidelity Digital Assets, et al. (Sept. 8, 2021) *available at* https://www.sec.gov/comments/sr-cboebzx-2021-039/srcboebzx2021039-250110.pdf.

74 These statistics are based on samples of bitcoin liquidity in USD (excluding stablecoins or Euro liquidity) based on executable quotes on Coinbase Pro, Gemini, Bitstamp, Kraken, LMAX Exchange, BinanceUS, and OKCoin during February 2021.

points with a market impact of 50 basis points. Stated another way, a market participant could enter a market buy or sell order for $10 million of bitcoin and only move the market 0.5%. More strategic purchases or sales (such as using limit orders and executing through OTC bitcoin trade desks) would likely have less obvious impact on the market—which is consistent with MicroStrategy, Tesla, and Square being able to collectively purchase billions of dollars in bitcoin. As such, the combination of CME Bitcoin Futures leading price discovery, the overall size of the bitcoin market, and the ability for market participants, including authorized participants creating and redeeming with the Trust, to buy or sell large amounts of bitcoin without significant market impact will help prevent the Shares from becoming the predominant force on pricing in either the bitcoin spot or CME Bitcoin Futures markets, satisfying part (b) of the test outlined above.

e. Other Means to Prevent Fraudulent and Manipulative Acts and Practices

The Commission has also recognized that the "regulated market of significant size" standard is not the only means for satisfying Section 6(b)(5) of the act, specifically providing that a listing exchange could demonstrate that "other means to prevent fraudulent and manipulative acts and practices" are sufficient to justify dispensing with the requisite surveillance-sharing agreement.[75]

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[75] See Winklevoss Order at 37580. The Commission has also specifically noted that it "is not applying a "cannot be manipulated" standard; instead, the Commission is examining whether the proposal meets the requirements of the Exchange Act and, pursuant to its Rules of Practice, places the burden on the listing exchange to demonstrate the validity of its contentions and to establish that the requirements of the Exchange Act have been met. Id. at 37582.

The Exchange believes that such conditions are present. Specifically, the significant liquidity in the spot market and the impact of market orders on the overall price of bitcoin mean that attempting to move the price of bitcoin is costly and has grown more expensive over the past year. In January 2020, for example, the cost to buy or sell $5 million worth of bitcoin averaged roughly 30 basis points (compared to 10 basis points in 2/2021) with a market impact of 50 basis points (compared to 30 basis points in 2/2021).[76] For a $10 million market order, the cost to buy or sell was roughly 50 basis points (compared to 20 basis points in 2/2021) with a market impact of 80 basis points (compared to 50 basis points in 2/2021). As the liquidity in the bitcoin spot market increases, it follows that the impact of $5 million and $10 million orders will continue to decrease the overall impact in spot price.

Recently, the Commission allowed three ETFs primarily invested in CME Bitcoin Futures to register and list on a national securities exchange ("Bitcoin Futures ETFs").[77] As described in its prospectus, BITO does not invest directly in bitcoin but rather seeks to provide capital appreciation primarily through managed exposure to cash-settled CME Bitcoin Futures contracts traded on commodity exchanges registered with the CFTC. Currently, the only such contracts are CME Bitcoin Futures. CME Bitcoin Futures are CFTC regulated futures contracts cash-settled in US dollars based on the CME BRR,

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76 These statistics are based on samples of bitcoin liquidity in USD (excluding stablecoins or Euro liquidity) based on executable quotes on Coinbase Pro, Gemini, Bitstamp, Kraken, LMAX Exchange, BinanceUS, and OKCoin during February 2021.

77 ProShares Bitcoin Strategy ETF (BITO); VanEck Bitcoin Strategy ETF (XBTF); Valkyrie Bitcoin Strategy ETF (BTF).

which is a volume-weighted composite of U.S. dollar-bitcoin trading activity on certain constituent exchanges including Bitstamp, Coinbase, Gemini, itBit, and Kraken.[78]

The CME BRR is based on substantially the same pricing data from digital asset trading platforms as the Index used by the Trust. The Index is designed to reflect the performance of bitcoin in U.S. dollars and the current constituent exchange composition of the Index is Bitstamp, Coinbase, Gemini, itBit and Kraken. As noted recently by a commenter on another exchange rule filing for a Spot Bitcoin ETP, Bitcoin Futures ETFs and the Trust are exposed to the same underlying pricing data and the same risks of manipulation.[79]

Both the Exchange and Sponsor believe that there is no basis for determining that the Bitcoin Futures ETFs satisfy Section 6(b)(5) of the Exchange Act while the Trust does not. Bitcoin pricing, whether in the spot market or the futures market, is determined on the digital asset trading platforms where supply and demand interact; and there is almost complete overlap in the underlying digital asset trading platforms that supply pricing information for the reference indices used by both the CME Bitcoin Futures market and the Trust.

Shortly after the Bitcoin Futures ETFs began trading, the Commission again disapproved a rule filing submitted by the Exchange to list and trade a Spot Bitcoin ETP on the grounds that the Exchange had failed to demonstrate satisfaction of Section

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78 See CME CF Bitcoin Reference Rate Index data at https://www.cmegroup.com/trading/cryptocurrency-indices/cf-bitcoin-reference-rate.html.

79 *See* Letter from Joseph A. Hall et al. to Vanessa Countryman on SR-NYSEArca-2021-90 (Nov. 29, 2021).

6(b)(5).[80] The Commission specifically disagreed with the Exchange's premises that (i) it is inconsistent with the Section 6(b)(5) standard for the Commission to permit a Bitcoin Futures ETF registered under the 1940 Act to launch but to disapprove the approval of a Spot Bitcoin ETP; (ii) it is inconsistent for the Commission to allow a Bitcoin Futures ETF that trades exclusively in CME Bitcoin Futures contracts and conclude that the CME Bitcoin Futures market is not a "market of significant size" under the Section 6(b)(5) standard; and (iii) while the 1940 Act provides certain investor protections, it is not designed to prevent or mitigate potential market manipulation in the markets for the assets underlying ETF Shares, which in the case of Bitcoin Futures ETFs would be the CME Bitcoin Futures market. Instead, the disapproval order stated that each proposed rule change is considered on its own merits and noted that the proposed rule did not relate to a product regulated under the 1940 Act and did not relate to the same underlying holdings as the Bitcoin Futures ETFs. In practice, however, the disapproval order did not address why a Spot Bitcoin ETP fails to satisfy the Section 6(b)(5) standard when it is exposed to the same underlying risks of manipulation as the CME Bitcoin Futures contracts primarily held by Bitcoin Futures ETFs, which have been allowed to register and list.

As recently as 2020, the Commission approved new exchange listing rules permitting all ETFs registered under the 1940 Act that meet Rule 6c-11, including Bitcoin Futures ETFs, to list under an exchange's generic listing standards without

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80 See Securities Exchange Act Release No. 93559 (November 12, 2021) 86 FR 64539 (November 18, 2021) (SR–CboeBZX–2021–019) (Order Disapproving a Proposed Rule Change to List and Trade Shares of the VanEck Bitcoin Trust under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares (the "VanEck Order")).

having to submit separate rule filing pursuant to Section 19(b).[81] In determining that the rule change was reasonably designed to help prevent fraudulent and manipulative acts and practices, the approval order stated that ETFs would be required to disclose their respective portfolio holdings under the 1940 Act and that the exchange rule included requirements relating to fire walls and procedures to prevent the use and dissemination of material, non-public information regarding the applicable ETF index and portfolio.[82] In approving the generic listing standards, the SEC did not require in-depth analysis into any particular markets or index components.[83] As a result, Bitcoin Futures ETFs are permitted to list and trade under generic listing standards without the requirement for a product specific rule filing such as this one – even when the underlying market, such as bitcoin markets underlying the CME Bitcoin Futures contracts, mirror those proposed as reference markets in the Index used by the Trust and other spot bitcoin ETP listing proposals.

As such, the Exchange and Sponsor note that: (i) the risks of manipulation in the bitcoin markets impacting the Trust are generally indistinguishable from those same risks

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81 See Securities Exchange Act Release No. 88566 (April 6, 2020), 85 FR 20312 (April 10, 2020) (SR-CboeBZX-2019-097) (Notice of Filing of Amendment No. 2 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 2, to Adopt BZX Rule 14.11(l) Governing the Listing and Trading of Exchange-Traded Fund Shares).

82 *Id.*

83 *Id.* With regard to surveillance, the approval order stated only that the rule change required the exchange to implement and maintain written surveillance procedure for ETF Shares and noted that the exchange would use its existing surveillance procedures applicable to derivative products to monitor trading in ETF Shares. While noting the ability of an exchange to rely on FINRA for information related to certain securities held by series of ETF Shares, the approval order focused on the exchange's surveillance of the market for ETF Shares.

impacting Bitcoin Futures ETFs; (ii) the Trust will have the same pricing sources as CME Bitcoin Futures and, thus, Bitcoin Futures ETFs; and (iii) the Trust will generally be subject to the same risks of manipulation as shares of Bitcoin Futures ETFs. It follows that the Exchange and Sponsor both believe that this proposal is designed to prevent fraudulent and manipulative acts and practices as compared to Bitcoin Futures ETFs and is therefore consistent with the Act. In addition to this proposal meeting the applicable "regulated market of significant size" standard as laid out above, approving this proposal is consistent with the treatment of substantially similar products, and the Exchange believes that any finding to the contrary would result in arbitrarily disparate treatment to the Trust.

Rule 14.11(e)(4) - Commodity-Based Trust Shares

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed on the Exchange pursuant to the initial and continued listing criteria in Exchange Rule 14.11(e)(4). The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The Trust has represented to the Exchange that it will advise the Exchange of any failure by the Trust or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the

Trust or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange may obtain information regarding trading in the Shares and listed bitcoin derivatives via the ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

The Exchange will obtain a representation that the Trust's NAV will be calculated daily and that these values and information about the assets of the Trust will be made available to all market participants at the same time. The Exchange notes that, as defined in Rule 14.1 1(e)(4)(C)(i), the Shares will be: (a) issued by a trust that holds a specified commodity[84] deposited with the trust; (b) issued by such trust in a specified aggregate minimum number in return for a deposit of a quantity of the underlying commodity; and (c) when aggregated in the same specified minimum number, may be redeemed at a holder's request by such trust which will deliver to the redeeming holder the quantity of the underlying commodity.

Upon termination of the Trust, the Shares will be removed from listing. The Trustee, Delaware Trust Company, is a trust company having substantial capital and surplus. The Delaware Trust Company also has the experience and facilities for handling corporate trust business, as required under Rule 14.11(e)(4)(E)(iv)(a). No change will be made to the trustee without prior notice to and approval of the Exchange. The Exchange

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84 For purposes of Rule 14.11(e)(4), the term commodity takes on the definition of the term as provided in the Commodity Exchange Act. As noted above, the CFTC has opined that Bitcoin is a commodity as defined in Section 1a(9) of the Commodity Exchange Act. See Coinflip.

also notes that, pursuant to Rule 14.11(e)(4)(F), neither the Exchange nor any agent of the Exchange shall have any liability for damages, claims, losses or expenses caused by any errors, omissions or delays in calculating or disseminating any underlying commodity value, the current value of the underlying commodity required to be deposited to the Trust in connection with issuance of Commodity- Based Trust Shares; resulting from any negligent act or omission by the Exchange, or any agent of the Exchange, or any act, condition or cause beyond the reasonable control of the Exchange, its agent, including, but not limited to, an act of God; fire; flood; extraordinary weather conditions; war; insurrection; riot; strike; accident; action of government; communications or power failure; equipment or software malfunction; or any error, omission or delay in the reports of transactions in an underlying commodity. Finally, as required in Rule 14.11(e)(4)(G), the Exchange notes that any registered market maker ("Market Maker") in the Shares must file with the Exchange in a manner prescribed by the Exchange and keep current a list identifying all accounts for trading in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, which the registered Market Maker may have or over which it may exercise investment discretion. No registered Market Maker shall trade in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, in an account in which a registered Market Maker, directly or indirectly, controls trading activities, or has a direct interest in the profits or losses thereof, which has not been reported to the Exchange as required by this Rule. In addition to the existing obligations under Exchange rules regarding the production of books and records (see, e.g., Rule 4.2), the registered Market Maker in

Commodity-Based Trust Shares shall make available to the Exchange such books, records or other information pertaining to transactions by such entity or registered or non-registered employee affiliated with such entity for its or their own accounts for trading the underlying physical commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, as may be requested by the Exchange.

Trading Halts

With respect to trading halts, the Exchange may consider all relevant factors in exercising its discretion to halt or suspend trading in the Shares. The Exchange will halt trading in the Shares under the conditions specified in BZX Rule 11.18. Trading may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. These may include: (1) the extent to which trading is not occurring in the bitcoin underlying the Shares; or (2) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. Trading in the Shares also will be subject to Rule 14.11(e)(4)(E)(ii), which sets forth circumstances under which trading in the Shares may be halted.

Trading Rules

The Exchange deems the Shares to be equity securities, thus rendering trading in the Shares subject to the Exchange's existing rules governing the trading of equity securities. BZX will allow trading in the Shares during all trading sessions on the Exchange. The Exchange has appropriate rules to facilitate transactions in the Shares during all trading sessions. As provided in BZX Rule 11.11(a) the minimum price variation for quoting and entry of orders in securities traded on the Exchange is $0.01

where the price is greater than $1.00 per share or $0.0001 where the price is less than $1.00 per share.

Surveillance

The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The issuer has represented to the Exchange that it will advise the Exchange of any failure by the Trust or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Trust or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange may obtain information regarding trading in the Shares and CME Bitcoin Futures via ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.[85]

Information Circular

Prior to the commencement of trading, the Exchange will inform its members in an Information Circular of the special characteristics and risks associated with trading the Shares. Specifically, the Information Circular will discuss the following: (i) the

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85 For a list of the current members and affiliate members of ISG, see www.isgportal.com.

procedures for the creation and redemption of Baskets (and that the Shares are not individually redeemable); (ii) BZX Rule 3.7, which imposes suitability obligations on Exchange members with respect to recommending transactions in the Shares to customers; (iii) how information regarding the IIV and the Trust's NAV are disseminated; (iv) the risks involved in trading the Shares outside of Regular Trading Hours[86] when an updated IIV will not be calculated or publicly disseminated; (v) the requirement that members deliver a prospectus to investors purchasing newly issued Shares prior to or concurrently with the confirmation of a transaction; and (vi) trading information.

In addition, the Information Circular will advise members, prior to the commencement of trading, of the prospectus delivery requirements applicable to the Shares. Members purchasing the Shares for resale to investors will deliver a prospectus to such investors. The Information Circular will also discuss any exemptive, no-action and interpretive relief granted by the Commission from any rules under the Act.

2. Statutory Basis

The Exchange believes that the proposal is consistent with Section 6(b) of the Act[87] in general and Section 6(b)(5) of the Act[88] in particular in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free

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86 Regular Trading Hours is the time between 9:30 a.m. and 4:00 p.m. Eastern Time.

87 15 U.S.C. 78f.

88 15 U.S.C. 78f(b)(5).

and open market and a national market system and, in general, to protect investors and the public interest.

The Commission has approved numerous series of Trust Issued Receipts,[89] including Commodity-Based Trust Shares,[90] to be listed on U.S. national securities exchanges. In order for any proposed rule change from an exchange to be approved, the Commission must determine that, among other things, the proposal is consistent with the requirements of Section 6(b)(5) of the Act, specifically including: (i) the requirement that a national securities exchange's rules are designed to prevent fraudulent and manipulative acts and practices;[91] and (ii) the requirement that an exchange proposal be designed, in

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89 See Exchange Rule 14.11(f).

90 Commodity-Based Trust Shares, as described in Exchange Rule 14.11(e)(4), are a type of Trust Issued Receipt.

91 As the Exchange has stated in a number of other public documents, it continues to believe that bitcoin is resistant to price manipulation and that "other means to prevent fraudulent and manipulative acts and practices" exist to justify dispensing with the requisite surveillance sharing agreement. The geographically diverse and continuous nature of bitcoin trading render it difficult and prohibitively costly to manipulate the price of bitcoin. The fragmentation across bitcoin platforms, the relatively slow speed of transactions, and the capital necessary to maintain a significant presence on each trading platform make manipulation of bitcoin prices through continuous trading activity challenging. To the extent that there are bitcoin exchanges engaged in or allowing wash trading or other activity intended to manipulate the price of bitcoin on other markets, such pricing does not normally impact prices on other exchanges because participants will generally ignore markets with quotes that they deem non-executable. Moreover, the linkage between the bitcoin markets and the presence of arbitrageurs in those markets means that the manipulation of the price of bitcoin price on any single venue would require manipulation of the global bitcoin price in order to be effective. Arbitrageurs must have funds distributed across multiple trading platforms in order to take advantage of temporary price dislocations, thereby making it unlikely that there will be strong concentration of funds on any particular bitcoin exchange or OTC platform. As a result, the potential for manipulation on a trading platform would require overcoming the liquidity supply of such arbitrageurs who are effectively eliminating any cross-market pricing differences.

general, to protect investors and the public interest. In order to meet this standard in a proposal to list and trade a series of Commodity-Based Trust Shares, the Commission requires that an exchange demonstrate that there is a comprehensive surveillance-sharing agreement in place with a regulated market of significant size.

The Commission's prior illustrative guidance in interpreting the terms "significant market" and "market of significant size" to include "a market (or group of markets) as to which (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 a surveillance-sharing agreement would assist the ETP listing market 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."[92]

The Exchange believes that this proposal is consistent with the requirements of Section 6(b)(5) of the Act and, as described and discussed above, the Sponsor's analysis demonstrates that the Exchange has satisfied the requirements under the Act that the CME Bitcoin Futures Market (i) is a regulated market; (ii) has a comprehensive surveillance-sharing agreement with the Exchange; and (iii) satisfies the Commission's "significant market" definition."

The Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed on the Exchange pursuant to the initial and continued listing criteria in Exchange Rule 14.11(e)(4). The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of the Shares on the Exchange during all trading sessions

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92 Id.

and to deter and detect violations of Exchange rules and the applicable federal securities laws. Trading of the Shares through the Exchange will be subject to the Exchange's surveillance procedures for derivative products, including Commodity-Based Trust Shares. The Trust has represented to the Exchange that it will advise the Exchange of any failure by the Trust or the Shares to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Exchange Act, the Exchange will surveil for compliance with the continued listing requirements. If the Trust or the Shares are not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under Exchange Rule 14.12. The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares and bitcoin futures with with entities that are members of the ISG and the Exchange or FINRA, on behalf of the Exchange, or both, may obtain information regarding trading in the Shares and listed bitcoin derivatives via the ISG, from other exchanges who are members or affiliates of the ISG, or with which the Exchange has entered into a comprehensive surveillance sharing agreement.

Quotation and last-sale information regarding the Shares will be disseminated through the facilities of the CTA. Quotation and last sale information for bitcoin is widely disseminated through a variety of major market data vendors, including Bloomberg and Reuters, as well as the Index. Information relating to trading, including price and volume information, in bitcoin is available from major market data vendors and from the exchanges on which bitcoin are traded. Depth of book information is also available from bitcoin exchanges. The normal trading hours for bitcoin exchanges are 24 hours per day, 365 days per year. The website for the Trust, which will be publicly

accessible at no charge, will contain the following information: (a) the current NAV per Share daily and the prior business day's NAV and the reported closing price; (b) the BZX Official Closing Price in relation to the NAV as of the time the NAV is calculated and a calculation of the premium or discount of such price against such NAV; (c) data in chart form displaying the frequency distribution of discounts and premiums of the Official Closing Price against the NAV, within appropriate ranges for each of the four previous calendar quarters (or for the life of the Trust, if shorter); (d) the prospectus; and other applicable quantitative information. The Trust will also disseminate the Trust's holdings on a daily basis on the Trust's website. The value of the Index will be made available by one or more major market data vendors, updated at least every 15 seconds during Regular Trading Hours.

The Exchange will halt trading in the Shares under the conditions specified in BZX Rule 11.18. Trading may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. These may include: (1) the extent to which trading is not occurring in the bitcoin underlying the Shares; or (2) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. Trading in the Shares also will be subject to Rule 14.11(e)(4)(E)(ii), which sets forth circumstances under which trading in the Shares may be halted.

For the above reasons, the Exchange believes that the proposed rule change is consistent with the requirements of Section 6(b)(5) of the Act.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purpose of

the Act. The Exchange notes that the proposed rule change, rather will facilitate the listing and trading of an additional exchange-traded product that will enhance competition among both market participants and listing venues, to the benefit of investors and the marketplace.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

The Exchange has neither solicited nor received written comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission will:

A. by order approve or disapprove such proposed rule change, or

B. institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's Internet comment form (http://www.sec.gov/rules/sro.shtml); or
- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-CboeBZX-2021-039 Amendment No. 1 on the subject line.

Paper comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-CboeBZX-2021-039 Amendment No. 1. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, D.C. 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-CboeBZX-2021-039 Amendment No. 1 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[93]

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93 17 CFR 200.30-3(a)(12).

Secretary