

MEMORANDUM

TO: File No. SR-NYSEARCA-2023-58

FROM: David Remus
Office of Market Supervision, Division of Trading and Markets

DATE: December 14, 2023

SUBJECT: Meeting with Hashdex re: Hashdex Bitcoin ETF

On December 14, 2023, David Shillman, Eric Juzenas, Molly Kim, Sarah Schandler, Stacia Sowerby, and David Remus from the Division of Trading and Markets, and Justin Dobbie from the Division of Corporation Finance, participated in a meeting with the following individuals:

Bruno Caratori, Hashdex
Samir Kerbage, Hashdex
Julia Castelo Branco, Hashdex
Michael Venuto, Tidal Financial Group
Thomas Champion, NYSE Arca
Peter Shea, K&L Gates
Neel Maitra, Wilson Sonsini Goodrich & Rosati

The discussion concerned NYSE Arca's proposed rule change to list and trade shares of the Hashdex Bitcoin ETF under NYSE Arca Rule 8.500-E. Hashdex also provided the attached presentation.



Hashdex

U.S. Securities and Exchange Commission Presentation

December 14, 2023

Agenda



Why the Fund intends to use Exchange for Physical (EFP) transactions



Background on EFP transactions



How the Fund will use EFP trades



Mitigation of manipulation risks through EFP transactions



Why does the Fund intend to use CME EFPs?

The **primary** reason: the use of CME EFPs establishes the CME as the regulated market of significant size for the Fund.

Prong 1 of the Significant Market Test is met* if the proposed market is the same on which the ETP trades its non-cash assets

EFP trades are CME transactions, as they happen under the regulatory oversight of that exchange

All non-cash assets of the fund (CME bitcoin futures and physical bitcoin) will be transacted exclusively at the CME



The CME is the regulated market of significant size for the Fund

Additionally:

Pursuant to the Exchange Act Section 6(b)(5)**, the use of EFPs helps deter and detect fraudulent and manipulative misconduct related to how the fund trades bitcoin when processing cash creations and redemptions.

* The Commission defines a "significant market" for commodity ETPs as one where manipulation would likely require trading on that market (Prong 1) and where the ETP's trading does not significantly impact prices (Prong 2). The Teucium Order waives the need to prove Prong 1 if an ETP shares surveillance and trades assets on the same regulated market.

**Exchange Act Section 6(b)(5) requires, in relevant part, that the rules of a national securities exchange be designed "to prevent fraudulent and manipulative acts and practices" and "to protect investors and the public interest."



Fund's Investment Strategy

The Fund will aim to **maximize its investment in spot bitcoin** and use CME Bitcoin Futures Contracts for trading and hedging.*

Why does the Fund intend to use CME Bitcoin Futures Contracts?



Use of EFP transactions to acquire physical bitcoin under the surveillance of the CFTC-regulated CME Bitcoin Futures Market



To unequivocally establish the CME Bitcoin Futures Market as the regulated market of significant size in relation to the Fund



More efficient hedging of cash flows of creations/redemptions requests without the costs and risks associated with trade credit financing**



It is a common practice in ETFs to allow for a small allocation to futures that can be used to offset cash and receivables for the purpose of better tracking the benchmark index

** If there are no Share redemption orders or currently due Fund-payable expenses and assuming that the Fund is able to utilize all available cash to purchase CME Bitcoin Futures Contracts, the Fund's portfolio is expected to be composed of at least 95% in bitcoin and up to 5% in cash, cash equivalents, and/or CME Bitcoin Futures Contracts.*

*** Spot Bitcoin markets operate a pre-funded model (due to a combination of bitcoin being a bearer asset and settlement being close to instantaneous). Depending on the size of the transaction, trade finance can significantly contribute to the overall cost of trading.*



Background on Exchange for Physical (EFP) transactions



EFP is a **facility for the trading of physical commodities** available on the CME Bitcoin Futures Market.



EFPs **have been around 100+ years** and have diverse applications in markets.



EFP transactions are **very common in other CME futures markets**, including gold, equities, FX, and interest rates futures.



For the Fund, EFPs will be used to **purchase and sell physical bitcoin by delivering or receiving an equivalent futures position.**



EFPs are commonly used for ETF arbitrage in **gold, interest rate and equities ETFs.**



The **same surveillance standards apply to EFP** transactions as apply to the rest of the CME Market.



How EFP is used in typical Cash Creations/Redemptions

Cash Creations and Redemptions using CME Bitcoin Futures Contracts are an efficient alternative to in-kind mechanisms and offer more investor protections than trading bitcoin directly in unregulated markets.

Creation Flow

Cash creation

T:

- 1) AP places creation order with the Transfer Agent
- 2) Issuer approves order
- 3) Fund buys CME Bitcoin Futures Contracts at the settlement price
- 4) Sponsor determines the required cash deposit (NAV)

T+1:

- 5) AP transfers cash to the Fund
- 6) Upon receipt of cash, the Cash Custodian instructs DTC to credit the shares to the AP
- 7) Fund exchanges long position on CME Bitcoin Futures Contracts for long bitcoin position (EFP)

Redemption Flow

Cash redemption

T:

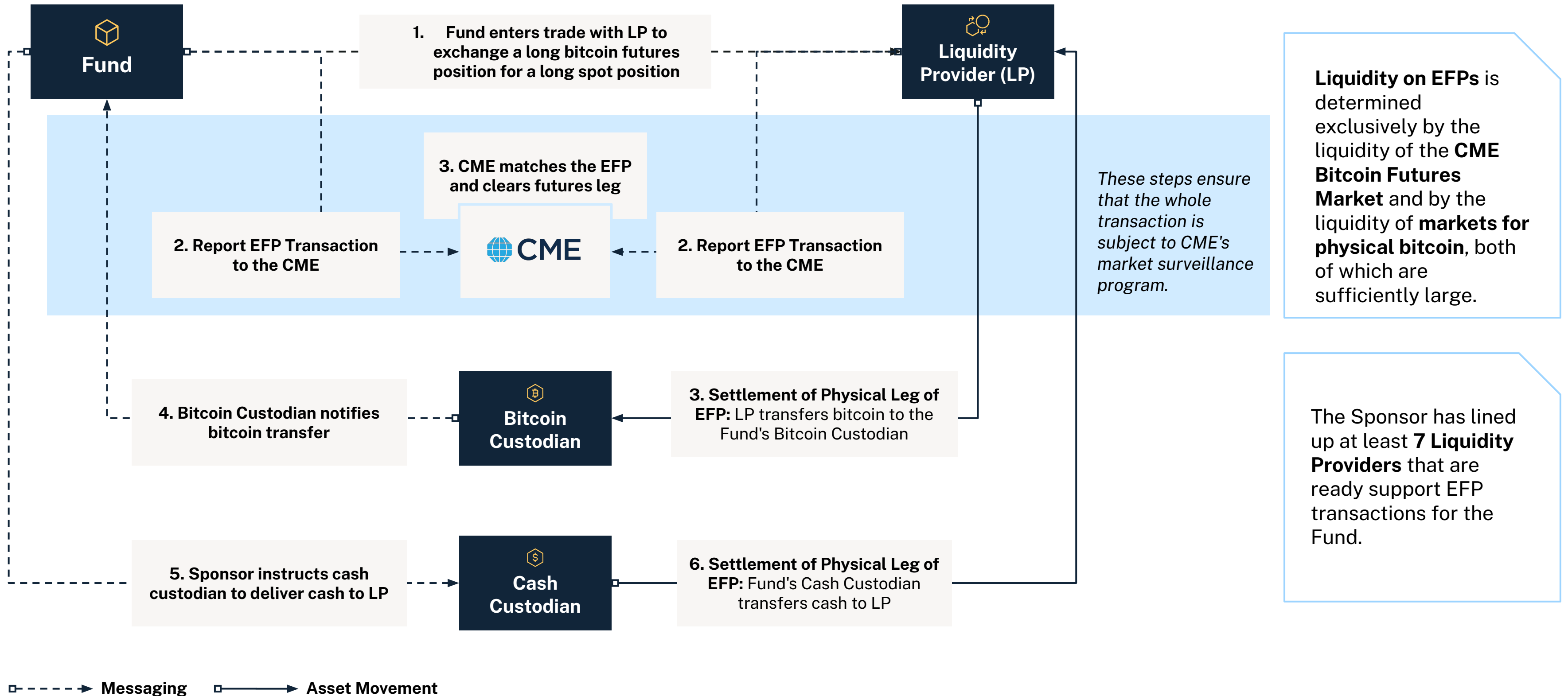
- 1) AP places redemption order with the Transfer Agent
- 2) Issuer approves the order
- 3) Fund exchanges long bitcoin position for long position on CME Bitcoin Futures Contracts (EFP)
- 4) Fund sells CME Bitcoin Futures Contracts at the settlement price
- 5) Sponsor determines the redemption distribution (NAV)

T+1:

- 6) AP delivers ETF shares to Fund's DTC Account
- 7) Fund delivers the redemption distribution to the AP



Bitcoin EFP transaction workflow



An EFP transaction in detail

#	Description	Liquidity Provider (LP)	Fund
1	Starting position	50 bitcoin \$0.00 Cash	10 BTC Contracts \$1,299,750.50 Cash
2	EFP transaction is bilaterally negotiated	LP and the Fund agree to terms of the EFP: <ul style="list-style-type: none"> • Fund sells / LP buys 10 BTC Contracts at the settlement price • Fund buys / LP sells 50 bitcoin at a +25bps spread vs. settlement of future 	
3	Fund's FCM and LP report transaction to CME		
4	CME publishes daily settlement price for said contract	BTC contract settlement price at \$26,060 Physical bitcoin price fixed at \$25,995.01	
5	LP sends bitcoin to the Fund	-50 bitcoin	+50 bitcoin
6	Fund sends cash to LP	+\$1,299,750.50 Cash	-\$1,299,750.50 Cash
7	CME clears futures leg of EFP	+10 BTC Contracts	-10 BTC Contracts
8	Final position	10 BTC Contracts \$1,299,750.50 Cash	50 bitcoin \$0.00 Cash

LPs and Fund negotiate price of physical bitcoin in relation to prevailing futures prices - this helps deter price manipulation

Per convention among participants in the bitcoin EFP market:

$$\text{spot_price} = \text{future_price} / (1 + \text{spread})$$



Pricing requirements for EFPs

538.F. Prices and Price Increments

The Exchange component of the EFRP transaction must be priced in accordance with the applicable futures price increments or option premium increments as set forth in the rules governing the Exchange contract.

EFRPs may be transacted at such commercially reasonable prices as are mutually agreed upon by the parties to the transaction. EFRPs may not be priced to facilitate the transfer of funds between parties for any purpose other than as the consequence of legitimate commercial activity.

Q11: Are there restrictions on the price at which an EFRP transaction may be executed?

A11: EFRPs may be transacted at such commercially reasonable prices as are mutually agreed upon by the parties to the transaction, provided that the price conforms to the applicable futures price increments or option premium increments set forth in the product chapter rules for the relevant Exchange contract.

The futures leg of EFP and EFR transactions in those commodities and contract months permitted to be priced at the settlement or marker price or any permissible price increment above or below the settlement or marker price pursuant to the provisions of Rule 524 will be eligible for TAS, TAM, or TMAC pricing. Please note that the futures leg of spot month Copper EFPs and EFRs may be priced solely at the settlement price, or TAS flat.

Please see the TAS Table set forth in the Interpretations & Special Notices Section at the end of Chapter 5 of each Exchange's Rulebook for information on the specific products, contract months and permissible price increments, which may also be accessed [here](#).

EFRPs executed at off-market prices are more likely to be reviewed by Market Regulation to determine the purpose for the pricing. EFRPs may not be priced off-market for the purpose of shifting substantial sums of cash from one party to another, to allocate gains and losses between the futures or options on futures and the cash or OTC derivative components of the EFRP, to evade taxes, to circumvent financial controls by disguising a firm's financial condition, or to accomplish some other unlawful purpose.



Reporting requirements for EFPs

538.I. Submission to the Clearing House

Each EFRP transaction shall be submitted to the Clearing House within the time period and in the manner specified by the Exchange and the Clearing House. In all cases, the record submitted to the Clearing House must reflect the correct EFRP transaction type and must reflect the accurate date and time at which the relevant terms of the transaction were agreed upon by the parties to the trade.

An EFRP transaction submitted to the Clearing House shall not be considered accepted by the Clearing House until the transaction has cleared and the first payment of settlement variation and performance bond has been confirmed.

Q23: How soon after execution must the EFRP be submitted to the Clearing House?

A23: Absent mitigating circumstances, EFRP transactions must be submitted to the Exchange as soon as possible, but no later than the end of the business day on which the EFRP was executed.

The relevant terms of the EFRP are considered to have been determined at the time the price and quantity of the Exchange contract and the corresponding related position component of the transaction are agreed upon by the parties to the EFRP. For EFPs and EFRs eligible to be priced as TAS, TAM, or TMAC transactions, the execution time of the trade is considered to have been determined at the time the quantity and price (TAS-, TAM-, or TMAC-flat or any permissible price increment above or below the settlement or marker price) have been agreed upon by the parties to the EFP or EFR. ¶

However, where the actual delivery quantity may not be precisely determined by the parties until the time of delivery, the parties may contractually agree to submit the transaction to the Clearing House within the required reporting period following the time at which the actual delivery quantities are determined, rather than reporting the EFRP at the time of pricing. Absent such contractual arrangement, the transaction must be reported at the time of pricing.

Notwithstanding the foregoing, EFRPs may not, under any circumstances, be submitted for clearing later than the end of the permissible posting period for EFRP transactions following the expiration of the underlying futures contract as specified in the relevant product chapter of the applicable Exchange rulebook.

Q24: Must the execution date and time be submitted for EFRPs?

A24: The date and time of execution must be accurately submitted for each EFRP transaction. The execution date and time to be submitted are the date and time at which the relevant terms of the transaction were determined by the parties to the trade as described in Q22.

The execution time for EFRPs must be entered in CME Direct or CME ClearPort in the local time of the party(ies) entering the EFRP.



Recordkeeping requirements for EFPs

538.H. Recordkeeping

Parties to an EFRP transaction must maintain all records relevant to the Exchange contract and the related position transaction, including order tickets, records customarily generated in accordance with relevant market practices, records reflecting payments between the parties and, where appropriate, transfer of title, as well as any other records required to be kept pursuant to CFTC Regulation 1.35. Brokers who facilitate EFRP transactions must maintain all records corresponding to their facilitation of the transactions.

Records related to EFRP transactions must be provided to the Exchange upon request. It shall be the responsibility of the carrying clearing member firm to obtain and submit the requested records of their clients to the Exchange on a timely basis.

Q20: Who is responsible for submitting EFRP records when a request for such records is made by the Market Regulation Department?

A20: Upon request, related position documentation for an EFRP must be provided on a timely basis and in the form and manner requested, to the Market Regulation Department. The clearing firm carrying the account shall be responsible for obtaining relevant EFRP records from its client and submitting the records to Market Regulation.

Pursuant to Rule 418 ("Consent to Exchange Jurisdiction"), any party initiating or executing a transaction subject to the rules of the Exchange, or for whose benefit such transaction has been executed, is subject to the jurisdiction of the Exchange and may be required by Market Regulation to produce records and cooperate fully with any investigation.

Failures to provide requested records in a complete or timely manner may result in the issuance of charges pursuant to the provisions of Rule 406 ("Issuance of Charges").

Q19: What are the recordkeeping requirements for EFRPs?

A19: Parties to an EFRP must maintain all records relevant to the Exchange contract and the corresponding related position transaction, including any records required to be kept pursuant to CFTC Regulation 1.35. Upon request, such records must be provided to Market Regulation in a timely manner.

Records that may be requested include, but are not limited to, the following:

- A. All order tickets, trade blotters, e-mails, instant messages, telephone recordings or other records related to the order placement, negotiation, execution and/or confirmation of the EFRP.
- B. All cash confirmations and signed contracts corresponding to the cash or derivative component of the EFRP. The documentation must contain all of the relevant terms of the transaction and counterparty information.
- C. For EFPs, third party proof of payment evidencing settlement and documentation representing the transfer of ownership of the commodity. For EFPs involving forward contracts, such information may be requested if the forward contract has settled at the time of the request. For EFRs and EOOs, where applicable, proof of payment evidencing settlement between the parties.
- D. Futures account statement reflecting confirmation of the EFRP.
- E. Records reflecting the booking of the cash or derivative transaction in the firm's internal bookkeeping systems.

Parties who facilitate EFRP transactions must maintain all records corresponding to their facilitation of the transactions.





Thank you!