



October 20, 2025

Christopher J. Kirkpatrick
Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20581

Re: Cboe Futures Exchange, LLC Product and Rule Certification
for Cboe Bitcoin Continuous Futures
Submission Number CFE-2025-023

Dear Mr. Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended (“Act”), and Regulation 40.2 and Regulation 40.6 of the regulations promulgated by the Commodity Futures Trading Commission (“CFTC” or “Commission”) under the Act, Cboe Futures Exchange, LLC (“CFE” or “Exchange”) hereby submits terms and conditions for Cboe Bitcoin Continuous (“PBT”) futures (“Product”) to be traded on CFE and accompanying rule amendments to incorporate the Product into CFE’s rules (“Amendment”).

The Amendment consists of amended Chapter 27 of the CFE Rulebook regarding the Product and related revisions to the Policies and Procedures Section of the CFE Rulebook. A summary Product specifications chart for PBT futures is included in Exhibit 1 to this submission. Exhibit 2 to this submission sets forth the rule changes included in the Amendment. Exhibit 3 to this submission sets forth the Cboe Continuous Futures Funding Amount Methodology.

The terms and conditions for the Product and the Amendment will become on the first date that they are permitted to become effective pursuant to CFTC Regulations 40.2 and 40.6 (“Effective Date”) based on the date of submission of this filing to the Commission and the length of the current U.S. government shutdown. The Product may be listed for trading on CFE on or after the Effective Date on a date to be announced by the Exchange through the issuance of an Exchange notice. CFE currently plans to list PBT futures for trading commencing on the November 10, 2025 trade date. CFE will notify the Commission if this currently planned initial listing date were to change.

PBT Futures

PBT futures are long-dated, cash-settled futures contracts based on the price of bitcoin in U.S. dollars as reflected by the Cboe Kaiko Bitcoin Index. Open positions in PBT are subject to a daily cash adjustment.

The Cboe Kaiko Bitcoin Index has a real-time rate and an hourly rate. The Cboe Kaiko Bitcoin Real-Time Rate (“CKBRT”) is used in connection with the daily cash adjustment applied to PBT futures contracts, and the Cboe Kaiko Bitcoin Hourly Rate (“CKBR”) is used to determine the final

settlement value of PBT futures contracts.

PBT futures are designed to provide continuous, long-term exposure to the price of bitcoin without the need for frequent rollovers to subsequent futures expirations in order to maintain a futures position or related contract management.

PBT futures will be listed for trading on CFE and will be cleared through Cboe Clear U.S., LLC (“CCUS”). CCUS is a Derivatives Clearing Organization (“DCO”) that is an affiliate of CFE.

Underlying Digital Asset Market

Bitcoin is a digital asset based on the decentralized, open-source protocol of a peer-to-peer payments network. The Bitcoin network hosts the decentralized public transaction ledger, the Bitcoin blockchain (or ledger), on which all bitcoin is recorded. The blockchain is a linked body of data, made up of units called blocks containing information about each transaction processed. Blocks are created by “miners” that solve highly complex mathematical problems. The bitcoins themselves are the assets that can be transferred on the network, to which one claims ownership. No single entity owns or operates the Bitcoin network. The infrastructure of the Bitcoin network is collectively maintained by a decentralized user base. The Bitcoin blockchain is capped at 21 million bitcoins. As of June 30, 2025, the total supply of mined bitcoins is approximately 19.9 million bitcoins, which represents close to \$2.2 trillion in market capitalization. The 21 million bitcoin limit is anticipated to be reached sometime in 2140.

Bitcoin may be obtained through various methods, including among others, paying cash for bitcoin, providing a good or service in exchange for bitcoin, or receiving bitcoin in exchange for fiat currency or another digital asset on a digital asset exchange. Bitcoin may also be obtained by verifying bitcoin transactions through mining, which rewards miners with bitcoin. Rewarding bitcoin to miners incentivizes miners to try to solve the mathematical problems in turn making the network more secure.

The spot bitcoin market has undergone significant transformation over the past five to ten years, evolving from a niche market to a sophisticated trading ecosystem. Beginning as a niche market with less mature exchanges, liquidity, and institutional support, the landscape shifted dramatically as improved infrastructure emerged, institutional adoption began, and exchanges developed more sophisticated trading capabilities and security protocols. The current bitcoin market features professional-grade execution platforms, institutional custody solutions, and advanced trading tools comparable to traditional financial markets. The 2024 U.S. Securities and Exchange Commission (“SEC”) approval of U.S. spot bitcoin Exchange-Traded Products (“ETPs”) marked a turning point,¹ significantly expanding market access to financial products based on bitcoin. In general, the level of liquidity, market quality, and participation from major financial institutions has grown in recent years reflecting the evolution of bitcoin into a legitimate, sophisticated asset class.

Since early 2019, the volume traded in bitcoin has experienced substantial growth. The 30-day moving average of the dollar value of USD-based bitcoin volume has grown from \$675 million in February 2019 to approximately \$10 billion as of July 1, 2025.²

Index that Underlies PBT Futures

¹ The SEC’s 2024 approval order of U.S. spot bitcoin ETPs is available at <https://www.sec.gov/files/rules/sro/nysearca/2024/34-99306.pdf>.

² Volume statistics included in this submission are derived from Coin Metrics Rates at <https://rates.coinmetrics.io/>.

The Cboe Kaiko Bitcoin Index, developed by Kaiko for Cboe, is calculated at different rates including the CKBRT (real-time rate) and CKBR (hourly rate) (together, the “Cboe Kaiko Bitcoin Index rates”). The Cboe Kaiko Bitcoin Index provides USD-denominated reference rates for the spot price of bitcoin by utilizing prices of bitcoin from constituent digital asset exchanges over either a ten-second or one-hour period of time (depending on the rate). The Cboe Kaiko Bitcoin Index represents the price of bitcoin by aggregating trade data from the constituent exchanges:

- for the CKBRT, during a 10-second calculation window, calculated and published every five seconds; and
- for the CKBR, during a one-hour calculation window, calculated and published every hour.

Kaiko implements an aggregation methodology that consists of a look-back that:

- for the CKBRT, splits the 10-second reference rate calculation periods into 10 one-second segments (referred to as partitions); and
- for the CKBR, splits the one-hour reference rate calculation periods into 10 six-minute partitions.

For each partition, Kaiko calculates the most representative trade price. The representative trade prices for those partitions are then used to calculate the final rate for the 10-second window for the CKBRT and the one-hour window for the CKBR.

First, for each calculation window for a Cboe Kaiko Bitcoin Index rate (i.e., 10 seconds for the CKBRT or one hour for the CKBR), executed trades in each partition are subject to a volume-weighted median price calculation, which significantly mitigates any impact from outliers. Specifically, the volume-weighted median is calculated as the price of the trade that lies at 50% of the cumulative volume for the partition. A volume-weighted median is calculated for each of the partitions in a 10-second or one-hour calculation window, as applicable. Then, a time-weighted average price of all volume-weighted median prices across the partitions in a calculation window is calculated. A time-weighted calibration method is applied which provides more weight to the most recent prices included in the calculation window. The ten weighted prices for the CKBRT partitions, and the six weighted prices for the CKBR partitions are then normalized and aggregated to provide the final index reference rate for the 10-second window for the CKBRT, and the one-hour window for the CKBR.

Pursuant to the Cboe Kaiko Rates methodology applicable to the Cboe Kaiko Bitcoin Index rates, if for any reason any constituent exchange transactions are identified as potentially suspect within a partition, the most representative trade may be adjusted to disregard spurious data. In addition, Kaiko may remove a constituent exchange or otherwise revise its methodology so that the Cboe Kaiko Bitcoin Index rates continue to reflect the target underlying economic reality, particularly if a constituent exchange has been found to have experienced an “exclusion action” such as fraud, market manipulation, or significant loss of volume or liquidity.

The Funding Amount, as described below, includes one-minute intervals measuring the variance between the PBT futures price and the CKBRT price throughout a trading day (i.e., a “Basis”) from 5:00 p.m. (previous day) until 3:00 p.m. All references to times in this submission are in Chicago time unless otherwise indicated. A description of the Funding Amount calculation, including a description of the Basis rates, is provided below. Pursuant to new Rule 2703, the Exchange may in its

sole discretion establish a Funding Amount for a PBT futures contract that it deems to be a fair and reasonable reflection of the market if the Exchange determines in its sole discretion that the Funding Amount determined by the methodology set forth in the Cboe Continuous Futures Funding Amount Methodology is not a fair and reasonable reflection of the market.

Pursuant to new CFE Rule 2703, if CFE concludes that the final settlement value of an expiring PBT futures contract based on the CKBR does not fairly represent the market value of the price of bitcoin in U.S. dollars at the time of the determination of the final settlement value, CFE may determine an alternative settlement value, based upon, among other things, one or more third party index(es) or reference price(s) that reflect the price of bitcoin in U.S. dollars. The Exchange also notes that if a final settlement value for an expiring PBT futures contract is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the final settlement value of the PBT futures contract will be determined in accordance with the Rules of CCUS.

For the purpose of any Kaiko index computation, including the Cboe Kaiko Bitcoin Index rates, Kaiko implements vetting of the digital asset exchanges used as data sources for determining the rates. The Cboe Kaiko Index rates follow a quarterly rebalancing calendar (March, June, September and December) so that the rates are composed of relevant price data feeds and complies with Kaiko's methodology, including initial vetting, liquidity, and optimization requirements. At each quarterly review, Kaiko conducts asset-agnostic vetting, asset-specific vetting, and additional optimization of each constituent exchange. Each constituent exchange must meet the following criteria as part of the asset-agnostic vetting process conducted by Kaiko based on available information, including information made available by the constituent exchanges: is absent from any sanction list; has been operating for the past five years; is located in a stable and open country; is regulated by an independent government body; has Know Your Customer ("KYC") and Anti-Money Laundering ("AML") controls in place; has trading policies in place; offers reliable Representational State Transfer Application Programming Interface ("REST API") and WebSocket data feeds; offers reliable live and historical trade data; and provides cold storage for customer funds. As part of the asset-specific vetting process for the Cboe Kaiko Bitcoin Index rates, each constituent exchange must have at least 0.5% of the total observed liquidity across all the constituent exchanges in the Cboe Kaiko Bitcoin Index rates over the past three months. As part of the additional optimization process, the trading volume (specifically, any zero-volume gaps) on each constituent exchange is individually analyzed as compared to its levels of liquidity. Kaiko may change the constituent exchanges used as data sources for determining the Cboe Kaiko Bitcoin Index and CKBR and CKBRT rates from time to time in connection with this process.

In the event that bitcoin experiences a fork, the form of bitcoin on which all then currently listed and subsequently listed PBT futures contracts and their final settlement values will be based is the form of bitcoin that is used by Kaiko to calculate the Cboe Kaiko Bitcoin Index following the fork.

The above description is intended to be a high-level summary of the Cboe Kaiko Bitcoin Index and its applicable rates, CKBR and CKBRT, as of the date of this filing. The following materials may be referenced for additional detail and further information regarding the Cboe Kaiko Bitcoin Index, the CKBR and CKBRT rates, and their methodology:

- Cboe Kaiko Digital Asset Rates Rulebook, published September 2, 2025, which may be accessed at <https://25446524.fs1.hubspotusercontent-eu1.net/hubfs/25446524/Factsheets/Cboe%20Kaiko%20Rates%20Rulebook.pdf>;
- Kaiko Digital Assets Rates Rulebook, published May 14, 2024, which may be accessed at <https://25446524.fs1.hubspotusercontent-eu1.net/hubfs/25446524/Factsheets/Kaiko%20Benchmark%20Rates%20Rulebook%20->

[%20202212%20\(1\).pdf](#); and

- Kaiko Exchange Ranking Rulebook, published September 1, 2025, which may be accessed at <https://25446524.fs1.hubspotusercontent-eu1.net/hubfs/25446524/Factsheets/Kaiko%20Exchange%20Ranking%20Rulebook.pdf>.

Effective November 3, 2025 and prior to the planned initial listing date (November 10, 2025) for PBT futures, the Cboe Kaiko Bitcoin Index will have five constituent exchanges from which prices are used to calculate the CKBR and CKBRT: Bitstamp, Crypto.com, EDX Markets, itBit, and LMAX Digital. Based on available information, each of the constituent digital asset exchanges included in the Cboe Kaiko Bitcoin Index has a set of rules or binding terms and conditions for participants. The rules or terms and conditions governing activity on each constituent exchange include provisions that prohibit participants from engaging in fraudulent acts, abusive practices, and/or market manipulation. Additionally, each of the constituent exchanges is regulated as a money services business (“MSB”) under the Financial Crimes Enforcement Network (“FinCEN”) and is subject to KYC and AML (“KYC/AML Program”) compliance obligations.

The Exchange represents that the Exchange or an affiliate of the Exchange has an Information Sharing Agreement (“ISA”) in place with each of the constituent exchanges that comprise the Cboe Kaiko Bitcoin Index under which the Exchange may exercise the provisions of the ISA.

The Cboe Kaiko Bitcoin Index and CKBR and CKBRT rates, above information regarding the Cboe Kaiko Bitcoin Index and CKBR and CKBRT rates, and above-referenced documents regarding the Cboe Kaiko Bitcoin Index and CKBR and CKBRT rates may change over time.

Kaiko will provide CFE with information regarding the bitcoin transactions in U.S. dollars (by timestamp, symbol, price, quantity, and underlying exchange), and other information as may be agreed upon by CFE and Kaiko, used to calculate the Cboe Kaiko Bitcoin Index to assist CFE in its ability, if requested, to review trading related to the CKBRT as an input in the daily Funding Amount calculation, including the Basis rates calculated throughout a trading day. The Funding Amount calculation is described below. As the case may arise, CFE will review the bitcoin transactions in U.S. dollars that occur on those constituent exchanges during basis rate intervals relevant to any anomalous activity identified by CFE using the above information and may request additional information from the constituent exchanges as appropriate.

Additionally, Kaiko will provide CFE with the same information described above used to calculate the CKBR during the final settlement value periods for PBT futures (from 9:00 a.m. to 10:00 a.m. on a final settlement date) to assist CFE in its ability to review trading relating to the calculation of the CKBR during final settlement. CFE will review the bitcoin transactions in U.S. dollars that occur on those constituent exchanges during the final settlement value period using the above information and may request additional information from the constituent exchanges as appropriate.

Cboe Kaiko Bitcoin Index Rates Analysis Compared to Other Bitcoin Indexes

CFE conducted an analysis of the prices of the Cboe Kaiko Bitcoin Index rates (CKBRT and CKBR), inclusive of the constituents that will be included in the Cboe Kaiko Bitcoin Index rates on November 3, 2025, compared to other bitcoin indexes over the last year to determine whether the Cboe Kaiko Bitcoin Index rates are representative of the broader bitcoin market. The results of that analysis are described below and are based on a review conducted over the time period from October 2024 through September 2025.

The analysis compared the Cboe Kaiko Bitcoin Index rates in relation to the CME CF Bitcoin Reference Rate,³ the CoinDesk Bitcoin Price Index rate,⁴ and the Kaiko Bitcoin Real-Time Rate.

- The CME CF Bitcoin Reference Rate is comprised of pricing sourced from Bitstamp, Bullish, Coinbase, Crypto.com, Gemini, itBit, Kraken, and LMAX Digital.
- The CoinDesk Bitcoin Price Index rate is comprised of pricing sourced from Bitstamp, Coinbase, Crypto.com, Gemini, itBit, Kraken, and LMAX Digital.
- The Kaiko Bitcoin Real-Time Rate is comprised of pricing sourced from Bitstamp, Crypto.com, Gemini, Kraken, and LMAX Digital.

As such, the pricing sources that comprise the CKBRT, used in connection with the daily cash adjustment applied to PBT futures contracts, CME CF Bitcoin Reference Rate, CoinDesk Bitcoin Price Index Rate, and Kaiko Bitcoin Real-Time Rate are representative of the broader digital asset spot market in bitcoin.

CFE reviewed the correlation between the daily returns of the CKBRT, used in connection with the daily cash adjustment applied to PBT futures contracts, and the daily CME CF Bitcoin Reference Rate⁵ and hourly Kaiko Bitcoin Real-Time Rate.⁶

- The correlation between the daily returns of the CKBRT and CME CF Bitcoin Reference Rate was 0.966.
- The correlation between the daily returns of the CKBRT and Kaiko Bitcoin Real-Time Rate was 0.999.

Likewise, CFE reviewed the correlation between the daily returns of the CKBR, used to determine the final settlement value of a PBT futures contract, and the daily CME CF Bitcoin Reference Rate and Kaiko Bitcoin Hourly Rate at 10:00 a.m. each day.

- The correlation between the daily returns of the CKBR and CME CF Bitcoin Reference Rate at 10:00 a.m. CT was 0.996.
- The correlation between the daily returns of the CKBR and Kaiko Bitcoin Hourly Rate at 10:00 a.m. CT was 0.999.

These daily return correlations of 0.966 and 0.999 for CKBRT, and 0.996 and 0.999 for CKBR, indicate that the prices generated by the Cboe Kaiko Bitcoin Index rates are very strongly aligned with the prices generated by the CME CF Bitcoin Reference Rate and Kaiko Bitcoin Rates.

³ CME bitcoin futures are based on the CME CF Bitcoin Reference Rate.

⁴ CFE reviewed the CoinDesk Bitcoin Price Index rates only in connection with its review of CKBRT prices because the CoinDesk Bitcoin Price Index rates are calculated on a real-time, per-minute basis.

⁵ CFE reviewed the CME CF Reference Rates published daily at 10:00 a.m. CT.

⁶ CFE reviewed the Kaiko Bitcoin Real-Time Rates published each hour.

CFE also reviewed the differences between the CKBRT and the daily CME CF Bitcoin Reference Rate, the CoinDesk Bitcoin Price Index rate, and hourly Kaiko Bitcoin Real-Time Rate.

- The average difference between the CME CF Bitcoin Reference Rate and CKBRT was 0.26%, and the median difference was 0.18%.
- The average difference between the CoinDesk Bitcoin Price Index and CKBRT was 0.04%, and the median difference was 0.02%.
- The average difference between the Kaiko Bitcoin Real-Time Rate and CKBRT was 0.01%, and the median difference was 0.01%.

CFE also reviewed the differences between the CKBR and the daily CME CF Bitcoin Reference Rate and Kaiko Bitcoin Hourly Rate at 10:00 a.m. CT each day.

- The average difference between the CKBR and CME CF Bitcoin Reference Rate at 10:00 a.m. CT was 0.09%, and the median difference was 0.06%.
- The average difference between the CKBR and Kaiko Bitcoin Hourly Rate at 10:00 a.m. CT was 0.01%, and the median difference was 0.01%.

CFE's analysis demonstrates that the Cboe Kaiko Bitcoin Index rates adequately and consistently represent the price of bitcoin in the spot market for bitcoin as reflected by the high price correlation between, and the marginal price divergence from, other bitcoin spot market indexes that are generally representative of the spot bitcoin market. CFE notes that the marginal differences in reference prices are by and large due to the differences in index methodology calculations between the different indexes.

Additionally, CFE conducted an analysis of the bitcoin trading volume during the final settlement period (9:00 a.m. to 10:00 a.m.) as well as from 2:00 p.m. to 3:00 p.m. between the Cboe Kaiko Bitcoin Index constituent exchanges and the MarketVector Coinbase Bitcoin Benchmark Rate, which is comprised only of Coinbase bitcoin spot market trading volume and is used to settle Coinbase bitcoin futures. That is, Coinbase bitcoin futures are based on prices sourced from only one digital asset exchange. CFE identified that, on average, the bitcoin trading volume included in the Cboe Kaiko Bitcoin Index was:

- 288% of the bitcoin trading volume included in the MarketVector Coinbase Bitcoin Benchmark Rate during the final settlement value period (9:00 a.m. to 10:00 a.m.); and
- 295% of the bitcoin trading volume included in the MarketVector Coinbase Bitcoin Benchmark Rate from 2:00 p.m. to 3:00 p.m.

CFE believes the material level of bitcoin trading volume included in the Cboe Kaiko Bitcoin Index along with the correlations between the Cboe Kaiko Bitcoin Index rates and other prominent bitcoin indexes demonstrate that the Cboe Kaiko Bitcoin Index rates are representative of the bitcoin spot market and that the digital asset exchange constituents of the Cboe Kaiko Bitcoin Index experience sufficient levels of liquidity as compared to another bitcoin index on which competing futures products are currently offered for trading.

Daily PBT Pricing (Funding Amount)

CFE will calculate and apply a daily cash adjustment—the Funding Amount—to open positions in a PBT futures contract once a day at the close of trading. Further detail regarding the Funding Amount calculation is included in the Cboe Continuous Futures Funding Amount Methodology (“CF Methodology”), which is attached as **Exhibit C**.

The Funding Amount is calculated once per day at 3:00 p.m. and applied to all open positions as of the close of trading at 4:00 p.m. On the final settlement date of an expiring PBT futures contract, a final Funding Amount is calculated at 10:00 a.m., which is further described below.

The Funding Amount is designed so that, if the incrementally weighted average of the futures price minus the underlying value over the course of a trading day is above (below) the underlying value, then the value of the cash adjustment will be negative (positive) for net long positions. The Funding Amount is calculated at 3:00 p.m. to align with the daily settlement time when the daily settlement prices for PBT futures contracts are determined.

If the incrementally weighted average of the futures price minus the underlying value over the course of a trading day is above (below) the underlying value, then the value of the cash adjustment will be positive (negative) for net short positions.

The Funding Amount is stated in USD.

The Funding Amount is applied to a net position of N contracts, where a long net position is positive and a short net position is negative, multiplied by a per-contract Funding Amount (“PCFA”), pursuant to the following formula: $\text{Funding Amount} = N * PCFA$.

The PCFA is calculated using the daily settlement value of the applicable PBT futures contract, multiplied by its contract size (0.01), multiplied by the Funding Rate, multiplied by -1. The PCFA will be rounded to the nearest even penny (utilizing banker’s rounding).

The Funding Rate is a weighted average of the variance between the PBT futures contract price and the value of the CKBRT (“Basis”), computed once per minute throughout a trading day from 5:00 p.m. (previous day) until 3:00 p.m. A clamp will be applied to the Funding Rate that limits the Funding Rate value to not be less than a minimum clamp value of -0.002 and to not exceed a maximum clamp value of 0.002.

Pursuant to the CF Methodology, the PBT futures contract price used to calculate the Basis during each minute will be the last trade price of the current trade date for a PBT futures contract (regardless of whether the last trade occurred within the current minute), if the last trade price is within the prevailing best bid and best offer price (prevailing bid-ask spread) at the end of the minute.

The last trade price need not be within the current minute. If the last trade price is outside the prevailing bid-ask spread or a trade has not occurred in the PBT futures contract during the applicable trading day prior to the end of the minute, the midpoint of the prevailing bid-ask spread at the end of the minute is used. For these purposes, the prevailing bid-ask spread is the last valid two-sided market within the minute. A valid two-sided market includes both a pending bid with a non-zero value and a pending offer with a non-zero value. A two-sided market will not be considered valid if it includes either no bid or no offer. If a valid two-sided market does not exist within the current minute, then a valid Basis value for the current minute cannot be calculated, and a Basis value for that minute will not be included in the Funding Rate calculation.

If the midpoint normalized bid-ask spread, as defined in the CF Methodology, at the end of a minute exceeds 0.005, then a valid futures price does not exist for this purpose and a valid Basis value for the current minute cannot be calculated. In that case, a Basis value for that minute will not be included in the Funding Rate calculation.

At 10:00 a.m. Chicago time on the final settlement date of an expiring PBT futures contract, a Final Funding Amount for that PBT futures contract will be calculated using a PCFA calculated by using the final settlement value of that PBT futures contract (as described below), multiplied by its contract size (0.01), multiplied by the Funding Rate, multiplied by -1.

PBT futures contracts are designed so that, throughout and over the life of a PBT future contract, the futures price converges to the underlying spot bitcoin price, as represented by the CKBRT. “Convergence” refers to the price relationship between a PBT futures contract and the underlying asset, bitcoin as represented by the CKBRT, maintained during each trading day. This convergence does not occur solely at one specific point in time, but rather the PBT futures price and the underlying price remain closely aligned throughout the life of a PBT futures contract with only a minimal basis between these prices. The daily Funding Amount mechanism, specifically the Funding Rate component, maintains this convergence.

All one-minute Bases calculated throughout a trading day, even those that occur further away from the close, are incorporated into an average Funding Rate to ultimately arrive at a daily Funding Amount.

The Funding Rate clamp is designed to mitigate extreme market stress and promote stability during periods of heightened volatility. CFE determined the clamp parameters by analyzing historical one-minute futures and spot bitcoin data of comparable products over a three-year period. The clamping level used captures 98% of the observations across the three-year period reviewed. CFE will review the clamp on a periodic basis and adjust clamp parameters for any changing market conditions over time.

The Funding Amount mechanism for PBT futures incentivizes both trading and price convergence between the futures price and the underlying asset. The Funding Amount has a direct relationship to the Funding Rate—that is, the difference between the price of the PBT futures contract and the price of bitcoin, represented by the CKBRT—in absolute terms.

If the Funding Rate grows in positive terms (that is, it becomes a larger positive number), then the Funding Amount—debited to long position holders and credited to short position holders at the end of the day—increases. This makes the investment more costly for long position holders and more profitable for short position holders, thus, incentivizing selling activity in order to capture the increased positive Funding Amount. This selling activity would bring the Funding Rate down to a lower value (closer to zero), forcing convergence.

The inverse is also true. If the Funding Rate grows in negative terms (that is, it becomes a larger negative number) then the Funding Amount—debited to short position holders and credited to long position holders at the end of the day—increases. This makes the investment more costly for short position holders and more profitable for long position holders, thus, incentivizing buying activity to capture the increased negative Funding Amount. This buying activity would bring the Funding Rate down to a lower value in absolute terms (closer to zero) forcing convergence.

Further, even if no transaction occurs in a PBT futures contract during a one-minute interval during which a Basis is calculated, if the Basis increases in absolute terms between the futures price (which may be the best bid and offer if there have been no futures transactions during a one-minute interval) and the CKBRT (either it becomes more positive or more negative), then participants may be incentivized to submit lower bids and offers (if the Basis is more positive) or higher bids and offers (if the Basis is more negative) due to the opportunity to benefit from the increased (in absolute terms) Funding Amount, ultimately contributing to tighter convergence in the Funding Rate. Therefore, the Funding Rate calculation is designed in a manner that achieves close convergence between the futures price and the underlying price, even if no transaction occurs in a PBT futures contract during a one-minute Basis interval.

CFE believes that the Funding Amount mechanism is designed in a manner that significantly mitigates the potential susceptibility to manipulation of the daily Funding Amount for a number of reasons, including, among others:

- An attempt to manipulate the daily Funding Amount would need to involve or otherwise account for each of the inputs to the Funding Amount calculation, including the Basis calculated at one-minute intervals throughout a given trading day.
- Any attempted manipulation of one input would adversely impact the other inputs. For example, if a participant holding a short position seeks to manipulate to cause an increase in the Funding Rate (because a positive Funding Rate is profitable for a short position holder), the participant would need to increase the PBT futures price with respect to the price of CKBRT so that the Funding Rate grows, resulting in a higher Funding Amount. However, increasing the PBT futures price would result in a bigger loss or lower gain per the end of day variation margin given the participant's short position. The same is true for long position holders seeking to manipulate to cause a decrease in the Funding Rate (because a negative Funding Rate is profitable for a long position holder).
- As described above, the mid-point of the best bid and offer in a PBT futures contract may be used to calculate the Basis during a one-minute interval in which the last trade price of the futures contract is outside of the prevailing bid-ask spread at the end of that one-minute interval, or in cases where there is no last trade price available. A participant attempting to move the bids and offers during a period of lower liquidity or trading activity would have to maintain a tight spread. If the last bid or offer is mispriced in such an attempt, it would present other participants with arbitrage opportunities on either side of the market, making it costly for the participant attempting to move the last bids and offers across multiple one-minute intervals potentially over a longer period of time.

Contract Specifications

In addition to describing the daily and final Funding Amount adjustment, and as further described in the attached summary product specifications chart for PBT futures and in new Chapter 27 of the CFE Rulebook, the contract specifications for PBT futures include the following:

The Exchange may list for trading up to three 120-month expirations for the PBT futures product. A PBT future contract with a 120-month expiration will expire 120 months from the month the PBT futures contract is initially listed for trading.

The final settlement date for a PBT futures contract is the last Friday of the calendar month in the calendar year denoted by the ticker symbol of the contract. This date is the last Friday of the 120th month from the month the PBT futures contract is listed for trading. If the final settlement date is a CFE holiday, the final settlement date shall be the business day immediately preceding the holiday.

There will be regular trading hours in PBT futures on business days Monday through Friday from 8:30 a.m. to 3:00 p.m. PBT futures will also have extended trading hours on business days Monday through Friday from 5:00 p.m. the previous day to 8:30 a.m. and from 3:00 p.m. to 4:00 p.m. Trading hours for an expiring PBT future will end at 10:00 a.m. on its final settlement date.

PBT futures will follow holiday trading schedules for New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Good Friday, Memorial Day, Juneteenth National Independence Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day that are the same as the holiday trading schedules for other CFE digital asset futures products that are cleared through CCUS.

Like for other CFE digital asset futures products cleared through CCUS, PBT futures will not have an extended trading hours segment starting on the day before a holiday and extending into a holiday. PBT futures will have an extended trading hours segment that begins on the holiday and extends into the next business day like is the case on a normal business day. For example, on a Monday holiday such as Presidents' Day, PBT futures will not have extended trading hours from 5:00 p.m. on Sunday through 10:30 a.m. on Monday. Instead, PBT futures will have a normal trading schedule starting on the Monday holiday with extended trading hours from 5:00 p.m. on Monday through 8:30 a.m. on Tuesday, regular trading hours from 8:30 a.m. to 3:00 p.m. on Tuesday, and extended trading hours from 3:00 p.m. to 4:00 p.m. on Tuesday.

The contract size and unit of trading of a PBT futures contract is 0.01 bitcoin.

PBT futures prices are stated in USD per 1 bitcoin.

Spread orders are not permitted in PBT futures contracts.

The final settlement value of an expiring PBT futures contract shall be the value of the CKBR, as determined by Kaiko, at 10:00 a.m. on the final settlement date of the expiring PBT futures contract. The final settlement value will be rounded to the nearest \$1.00.

If the Exchange concludes that the final settlement value of an expiring PBT futures contract determined in the manner described above does not fairly represent the market value of the price of bitcoin in U.S. dollars at the time of determination of the final settlement value, the Exchange may determine an alternative final settlement value for the PBT futures contract. That determination may be based upon, among other things, one or more third party index(es) or reference price(s) that reflect the price of bitcoin in U.S. dollars. Like with other CFE products, CFE rules for PBT futures provide that if the final settlement value is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the final settlement value will be determined in accordance with the Rules of CCUS.

Settlement of a PBT futures contract will result in the delivery of a cash settlement amount in accordance with the Rules of CCUS. The cash settlement amount on the final settlement date shall include (i) the final mark-to-market amount against the final settlement value of the PBT futures contract multiplied by 0.01 (which is the contract multiplier for PBT futures) and (ii) the Final Funding Amount, as described above.

The daily settlement price of a PBT futures contract is calculated at the close of regular trading hours in PBT futures on a business day, which is normally at 3:00 p.m. A four-step hierarchy is used to determine the daily settlement price for a PBT futures contract in which a subsequent step in the hierarchy may be used if the conditions for using the prior step(s) in the hierarchy have not been satisfied.

The first three steps in the hierarchy consist of (i) a volume-weighted average price (“VWAP”) determination based on PBT futures transactions during a 60 second measurement interval; (ii) a time-weighted average price (“TWAP”) determination based on best bid and best offer midpoints during a 60 second measurement interval; (iii) the CKBRT value at the daily settlement time adjusted by the difference between the CKBRT value at the daily settlement time on the preceding business day and the daily settlement price of the PBT futures contract on the preceding business day.

Under the fourth step of the hierarchy, the Exchange may in its sole discretion establish a daily settlement price for a PBT futures contract that it deems to be a fair and reasonable reflection of the market under certain conditions. In particular, the Exchange may exercise this authority if it determines in its sole discretion that the daily settlement price established by the above parameters is not a fair and reasonable reflection of the market or if there is a trading halt in the contract or other unusual circumstance at or around the daily settlement time.

The allocation method for the trading of PBT futures on CFE’s trading system (“CFE System”) is price-time priority.

Block Trades are permitted in PBT futures provided that they satisfy the requirements of CFE Rule 415 (Block Trades). The minimum Block Trade quantity for PBT futures is 250 contracts. The minimum price increment for a Block Trade in PBT futures is \$0.01. Block Trades in PBT futures may not be executed as Spread Orders.

Exchange of Contract for Related Position (“ECRP”) transactions may not be entered into with respect to PBT futures.

PBT futures will be subject to automated price limits during regular and extended trading hours. These price limits include a price limit for a minimum of 2 minutes in the event of an initial 20% upward or downward futures price movement and for a minimum of 5 minutes in the event of additional 10% upward or downward futures price movements.

Related Policy and Procedure Updates

In addition to the contract specification rules for PBT futures in Chapter 27 of the CFE Rulebook, the Amendment makes updates to two Policies and Procedures in the Policies and Procedures Section of the CFE Rulebook.

Policy and Procedure V (Emergency and Physical Emergency Delegations and Procedures) sets forth delegations to take emergency actions which are provided for under CFE rules. New CFE Rule 2702(k)(i) includes the price limit provisions for PBT futures that are described above. Rule 2702(k)(i)(H) also provides that the CFE Trade Desk may, in its absolute and sole discretion, take any action it determines necessary to protect market integrity. This authority includes, but is not limited to, the authority to modify or eliminate the price limit parameters under Rule 2702(k)(H) at any time. The Amendment updates Policy and Procedure V to reference that the senior person in charge of the CFE Trade Desk has the authority to exercise the authority of the Trade Desk under Rule 2702(k)(i)(H). The

CFE Trade Desk also retains the ability to halt trading in PBT futures at any time if appropriate (including prior to reaching a particular price limit level) in the interest of protecting market integrity pursuant to Rule 2702(k)(i)(H) and under CFE's emergency authority pursuant to CFE Rule 418 (Emergencies).

Policy and Procedure XIX sets forth submission time frames for orders (including cancel orders and cancel replace/modify orders) in CFE products. The Amendment modifies Policy and Procedure XIX to provide for these time frames for PBT futures.

Potential Uses of PBT Futures

Since the prices of PBT futures are based on the Cboe Kaiko Bitcoin Index, which reflects the price of bitcoin in the underlying spot bitcoin market, market participants may use PBT futures to achieve both long and short exposure to the price of bitcoin on a continuous long-term basis, reducing the operational burden of position rolling. PBT futures expand the investment and risk management toolkit relating to bitcoin, offering market participants enhanced hedging capabilities and capital efficiencies.

PBT futures may allow miners to hedge production costs, bitcoin merchant processors to hedge inventories, merchants that accept bitcoin to hedge inventories, and holders of bitcoin to hedge their holdings. PBT futures may also provide liquidity providers with a means to hedge their bitcoin exposure from their transactions in bitcoin on digital asset exchanges, in the over-the-counter market, and on other markets for bitcoin derivatives. In particular, PBT futures may provide market participants that do not wish to transact in or hold spot digital assets with a way to gain continuous, long-term exposure to bitcoin without the need to take or make delivery of the actual digital asset.

The contract size and price increments for PBT futures are intended to provide market participants with flexibility in tailoring their exposure to the bitcoin ecosystem without the need to hold the underlying digital asset. The relatively smaller contract size and smaller price increments for PBT futures are intended to enable liquidity providers to offset risk while seeking to facilitate quote-driven markets in the Product.

Legal Conditions

CFE has undertaken a due diligence review of the legal conditions, including conditions that relate to contractual and intellectual property rights, which may materially affect the trading of the Product. Kaiko has granted a license to CFE which permits CFE to list PBT futures for trading.

Market Participant Input

CFE has conferred with CFE Trading Privilege Holders ("TPHs"), CFE Clearing Members, and other CFE market participants regarding their interest in transacting in and clearing for PBT futures. Based on that input, CFE believes that there is interest in and demand for transacting in PBT futures among CFE TPHs, Clearing Members, and market participants. CFE discussions with market participants provided valuable feedback to assist CFE in tailoring PBT futures contracts in a manner that aligns with the structure and practices of the U.S. futures market.

DCM Core Principles

CFE believes that the Product and Amendment are consistent with the Designated Contract Market ("DCM") Core Principles under Section 5 of the Act, including for the reasons described below.

In particular, CFE believes that the Amendment is consistent with:

(i) DCM Core Principle 2 (Compliance with Rules) because CFE Rules include prohibitions against market manipulation and fraudulent, non-competitive, and disruptive trading practices that will apply to trading activity in PBT futures and CFE will conduct monitoring and surveillance of trading in PBT futures for compliance with CFE Rules;

(ii) DCM Core Principle 3 (Contracts Not Readily Susceptible to Manipulation) because of, among other things:

- The underlying bitcoin digital asset market is a highly liquid and capitalized market, in that the current 30-day moving average dollar value of USD-based bitcoin trading volume is approximately \$10 billion as of July 1, 2025.
- The methodology and constituent structure of the Cboe Kaiko Bitcoin Index rates promotes the integrity of the daily Funding Amount calculation as well as the final settlement value of PBT futures and discourages manipulative conduct. They do so in the following manner:
 - The Cboe Kaiko Bitcoin Index is calculated from a material amount of bitcoin trading volume from five eligible digital asset exchanges during the final settlement period as well as over the last hour of a trading day, as measured in relation to bitcoin trading volume on the sole constituent digital asset exchange used to calculate a rate that underlies a comparable digital asset futures product certified for trading by another DCM (as detailed above).
 - The Cboe Kaiko Bitcoin Index accurately represents underlying bitcoin spot market prices. As demonstrated and explained above, the Cboe Kaiko Bitcoin Index rates adequately and consistently represent the price of the bitcoin spot market due to high price correlation and insignificant levels of price divergence as compared to other digital asset spot market indexes.
 - The Cboe Kaiko Bitcoin Index is comprised of multiple constituents. Therefore, to manipulate the index price, a market participant would have to manipulate the prices in most, if not all, of the constituent exchanges – a likely prohibitively costly endeavor. Arbitrage opportunities across multiple digital asset trading venues serve to reduce price discrepancies and converge prices.
 - Regarding CKBR in connection with the final settlement period, focusing the volume- and time-weighted calculations on the trading activity across constituent exchanges over an hour look-back period decreases the likelihood in any manipulation attempt of being able to manipulate the price over the full period of time by limiting the impact of any one transaction and highly mitigating the risk of incorporating outliers into the calculation. The one-hour look-back period also greatly increases the cost of any attempt to manipulate the final settlement value due to arbitrage opportunities during the calculation window.
 - Likewise, regarding the CKBRT in connection with the Funding Amount calculation, focusing the volume- and time-weighted calculations on the trading activity across constituent exchanges over ten-second lookback periods on a minute-by-minute basis decreases the likelihood in any manipulation attempt of being able to manipulate the

price over an entire trading day by limiting the impact of any one transaction and mitigating the risk of incorporating outliers into the Funding Rate calculation and the ultimate Funding Amount.

- The CKBRT is calculated using 10 one-second partitions and the CKBR is calculated using 10 six-minute partitions. Calculation of the reference rates across multiple partitions limits any impact of attempted manipulation as transactions made in an attempt to manipulate executed during one partition will only have a limited effect on the overall reference rate.
- Use of a volume-weighted median calculation as part of the Cboe Kaiko Bitcoin Index rates calculations significantly mitigates any impact from outliers. For distributions that may have outliers or may be skewed, as could be the case in an attempt to manipulate, the median is significantly less sensitive to outliers than the mean. Additionally, volume-weighting serves to reduce higher counts of smaller trades that may be outliers and could otherwise impact a non-volume weighted median.
- As described above, Kaiko's methodology for the Cboe Kaiko Bitcoin Index rates is designed to minimize the impact of outliers and of any one market deviating in price from the rest of the constituent markets. Particularly, to address any potential anomalies or manipulation at individual digital asset exchanges, Kaiko implements measures that identify and disregard spurious data and that may remove a constituent exchange or otherwise revise Kaiko's methodology in light of, but not limited to, fraud, market manipulation, or significant loss of volume or liquidity on a constituent exchange.
- The data-sharing provisions and ISAs in place between CFE and Kaiko and the constituent digital asset exchanges will assist CFE in reviewing for market manipulation and abuses, and in enforcing compliance with CFE rules.
- Based on available information, each of the constituent digital asset exchanges in the Cboe Kaiko Bitcoin Index has a set of rules or binding terms and conditions for their participants that prohibit participants from engaging in fraudulent acts, market manipulation, and/or abusive practices.
- As each constituent exchange is a registered MSB, each constituent exchange is required to subject its participants to AML/KYC checks and procedures during the onboarding process.
- The Funding Amount calculation methodology promotes the integrity of the daily pricing of PBT futures and discourages potential manipulative conduct because:
 - The mechanism to calculate the Funding Amount utilizes various inputs in a manner that mitigates potential susceptibility to manipulation of the Funding Amount. An attempt to manipulate the daily Funding Amount would need to involve or otherwise account for manipulation of each of the inputs to the Funding Amount calculation, including the Bases calculated at one-minute intervals throughout the entirety of a given trading day.
 - As described above, any potential manipulation of one input in the Funding Amount calculation would adversely impact the other inputs, resulting in a bigger loss or lower

gain, and therefore the calculation mechanism for the Funding Amount acts as a negative incentive to potential manipulative conduct.

- The clamp on the Funding Rate is designed to mitigate extreme market stress and promote stability during periods of heightened volatility. CFE determined the clamp by analyzing historical one-minute futures and spot data of comparable products over a three-year period and will review the clamp on a periodic basis and adjust clamp parameters for any changing market conditions over time.
- CFE has rules that prohibit fraudulent, manipulative, and disruptive trading practices that will apply to trading in PBT futures, including among others, CFE Rule 601 (Fraudulent Acts), CFE Rule 603 (Market Manipulation), CFE Rule 604 (Adherence to Law), CFE Rule 620 (Disruptive Practices), and Policy and Procedure XVIII (Disruptive Trading Practices) of the Policies and Procedures Section of the CFE Rulebook. Activity encompassed by these rules includes prohibited activity that occurs directly through any trading, practice, or conduct in a CFE product or indirectly through any trading, practice, or conduct in the market of any commodity, security, index, or benchmark underlying a CFE product, regardless of the exchange on or market in which the underlying is transacted. Accordingly, these rules will apply to any prohibited activity under those rules that could occur directly through activity in PBT futures and to any prohibited activity under those rules that could occur indirectly in transactions utilized in the calculation of the CKBRT and CKBR.
- Pursuant to CFE Rule 501(c), CFE TPHs must make available to the Exchange upon request information and their books and records regarding their activities in a reference market of an index on which a CFE product is based. Thus, CFE TPHs are obligated to make available to the Exchange upon request information and their books and records regarding their activities on the constituent exchange bitcoin markets used to calculate the CKBRT and CKBR. Other CFE Market Participants (as defined by CFE Rule 308(c)) are also subject to the provisions of Rule 501(c) under CFE Rule 308(c) and Rule 308(d). A CFE Market Participant includes any Person initiating or executing a transaction on or subject to CFE rules directly or through an intermediary and any Person for whose benefit such a transaction had been initiated or executed.
- CFE Regulation will surveil for potential manipulation of PBT futures.
- Kaiko will provide CFE with information regarding the bitcoin transactions in U.S. dollars (by timestamp, symbol, price, quantity, and constituent exchange), and other information as may be agreed upon by CFE and Kaiko, used to calculate the CKBR during final settlement value periods for PBT futures (from 9:00 a.m. to 10:00 a.m. on a final settlement date) to assist CFE's ability to review trading relating to the calculation of the CKBR in connection with the final settlement. Kaiko will also provide CFE with the same information on an as-needed basis in connection with any review by CFE of the CKBRT in relation to daily Funding Amount calculations.

(iii) DCM Core Principle 4 (Prevention of Market Disruption) in that the price limit provisions applicable to PBT futures (which provide for an upper and lower price limit during regular and extended trading hours) will contribute toward reducing the potential risk of price distortions and market disruptions in PBT futures;

(iv) DCM Core Principle 5 (Position Limits or Accountability) because, among other things:

- PBT futures are subject to position limits and position aggregation under CFE Rule 412 and new Rule 2702(f). Specifically, a person may not own or control at any time more than 850,000 contracts net long or net short in all PBT futures contracts expirations combined, without obtaining a permissible exemption.
- The position limit is well below 25% of the 15.9 million bitcoin deliverable supply.⁷ It is a common practice to set position limits so that no market participant holds more than 25% of the deliverable supply of a commodity.⁸
- Positions in PBT futures are not being aggregated with positions in Financially Settled Bitcoin (“FBT”) futures. FBT futures are also listed for trading on CFE and are based on the same index. Specifically, FBT futures are cash-settled futures contracts based on the price of bitcoin in U.S. dollars as reflected by the Cboe Kaiko Bitcoin Rate Index. FBT futures currently have a notionally equivalent position limit of 85,000. The position limits for PBT futures and FBT futures are set so that a market participant holding positions in PBT futures and in FBT futures that are each at the maximum position limit level for both products would still be holding well below 25% of the deliverable supply of bitcoin.⁹
- The position limit is notionally the same as the position limit in place for FBT futures, another bitcoin futures product offered on CFE based on the same index.
- Additionally, the reportable position level for large trader reporting in PBT futures is 25 contracts. This reportable position level is equivalent to .25 bitcoins.

Accordingly, the Amendment establishes an appropriate initial position limit for PBT futures that will serve to reduce the potential for market manipulation in PBT futures.

(v) DCM Core Principle 6 (Emergency Authority) in that CFE has rule provisions, including CFE Rule 418 (Emergencies), that provide CFE with the ability to exercise emergency authority as necessary and appropriate which will apply to trading in PBT futures;

(vi) DCM Core Principle 7 (Availability of General Information) because the chart that summarizes the product specifications for PBT futures will be posted and maintained on CFE’s website;

(vii) DCM Core Principle 8 (Daily Publication of Trading Information) in that volume, open

⁷ The current supply of mined bitcoin is approximately 19.9 million bitcoins; however, approximately 20% of mined bitcoin is “burned”, or permanently lost. Therefore, the deliverable supply of bitcoin currently in circulation is approximately 15.9 million bitcoins, and 25% of that deliverable supply is approximately 4 million bitcoins.

⁸ For example, under the federal spot month position limits that apply to Core Referenced Futures Contracts, each spot month limit is set at or below 25% of estimated deliverable supply (available at <https://www.cftc.gov/IndustryOversight/MarketSurveillance/SpeculativeLimits/index.htm>).

⁹ See *supra* at note 7. The deliverable supply of bitcoin currently in circulation is approximately 15.9 million bitcoins, and 25% of that deliverable supply is approximately 4 million bitcoins. A market participant holding both the maximum limit for PBT futures and for FBT futures would hold the notional equivalent of 17,000 bitcoins, well below 4 million bitcoins.

interest, daily settlement prices, final settlement prices, and other price information for PBT futures will be made available publicly on a daily basis on CFE's website consistent with CFTC Regulation 16.01;

(viii) DCM Core Principle 9 (Execution of Transactions) because CFE will make PBT futures available for trading on CFE's trading system which provides for a competitive, open, and efficient market and mechanism for executing transactions that protects the price discovery process of trading on CFE's centralized market;

(ix) DCM Core Principle 10 (Trade Information) because CFE will maintain trade information for PBT futures as part of its audit trail and this information will be accessible to CFE Regulation for regulatory surveillance and enforcement purposes

(x) DCM Core Principle 11 (Financial Integrity of Transactions) because PBT futures will be cleared by CCUS, which is registered with the Commission as a DCO and is subject to the provisions of the Act and CFTC regulations relating to DCOs;

(xi) DCM Core Principle 12 (Protection of Markets and Market Participants) in that CFE rules include prohibitions against abusive practices, including abusive practices committed by a party acting as an agent for a participant, which will apply in relation to PBT futures;

(xii) DCM Core Principle 13 (Disciplinary Procedures) because CFE maintains disciplinary procedures and rules that authorize the Exchange to discipline market participants that commit CFE rule violations, including any rule violations relating to PBT futures;

(xiii) DCM Core Principle 14 (Dispute Resolution) because the CFE Rules provide a mechanism for market participants to arbitrate disputes that arise out of transactions executed on or subject to the rules of the Exchange, including transactions in the Product;

(xiv) DCM Core Principle 18 (Recordkeeping) because CFE's recordkeeping procedures, established pursuant to Commission Regulation 1.31, will apply with respect to Exchange records relating to PBT futures, including trade records and investigatory and disciplinary files;

(xv) DCM Core Principle 19 (Antitrust Considerations) because the listing of PBT futures will promote competition with digital asset futures products that are offered for trading on other markets; and

(xvi) DCM Core Principle 20 (System Safeguards) because CFE maintains system safeguards controls and procedures for its operations and automated systems that will be utilized to facilitate trading in PBT futures.

CFE believes that the impact of the Product and Amendment will be beneficial to the public and market participants. CFE is not aware of any substantive opposing views to the Product and Amendment. CFE hereby certifies that the Product and Amendment comply with the Act and the regulations thereunder. CFE further certifies that CFE has posted a notice of pending certification with the Commission and a copy of this submission on CFE's website (http://www.cboe.com/us/futures/regulation/rule_filings/cfe/) concurrent with the filing of this submission with the Commission.

Contact Information

Questions regarding this submission may be directed to Rebecca Tenuta at (773) 485-7926 and Arthur Reinstein at (312) 786-7570 in any related correspondence.

Cboe Futures Exchange, LLC

/s/ Troy Yeazel

By: Troy Yeazel
Managing Director

EXHIBIT 1**Summary Product Specifications Chart for
Cboe Bitcoin Continuous Futures**

CONTRACT NAME:	Cboe Bitcoin Continuous (“PBT”) Futures		
LISTING DATE:	MMMM DD, 2025		
DESCRIPTION:	<p>PBT futures are long-dated, cash-settled Continuous Futures contracts based on the price of bitcoin in U.S. dollars as reflected by the Cboe Kaiko Bitcoin Index.</p> <p>Open positions in PBT futures contracts are subject to a daily cash adjustment as described below.</p> <p>The Cboe Kaiko Bitcoin Index has a real-time rate and an hourly rate. The Cboe Kaiko Bitcoin Real-Time Rate is used in connection with the daily cash adjustment applied to PBT futures contracts and the Cboe Kaiko Bitcoin Hourly Rate is used to determine the final settlement value of PBT futures contracts.</p>		
CONTRACT EXPIRATIONS:	<p>The Exchange may list for trading up to three 120-month expirations for the PBT futures product.</p> <p>A PBT future contract with a 120-month expiration will expire 120 months from the month the PBT futures contract is initially listed for trading.</p>		
TICKER SYMBOLS:	<p>Futures Symbol: PBT followed by the contract month code for the expiration month and the last two integers of the year of the expiration date.</p> <p>Cboe Kaiko Bitcoin Real-Time Rate: CBOE-KAIKO_BTCUSD_RT</p> <p>Cboe Kaiko Bitcoin Hourly Rate : Cboe-KAIKO-BTCUSD</p>		
TRADING HOURS AND PROHIBITED ORDER TYPES:	Type of Trading Hours	Monday – Friday	
	Extended	5:00 p.m. (previous day) to 8:30 a.m.	
	Regular	8:30 a.m. to 3:00 p.m.	
	Extended	3:00 p.m. to 4:00 p.m.	
	<p>Spread Orders are not permitted in PBT futures contracts.</p> <p>All times referenced are Chicago time.</p>		
TRADING PLATFORM:	CFE System		
PRICING CONVENTIONS:	Prices of PBT futures are stated in USD per 1 bitcoin.		
CONTRACT SIZE:	The contract size and unit of trading of a PBT futures contract is 0.01 bitcoin.		
CONTRACT MULTIPLIER	The contract multiplier for PBT futures is 0.01.		
MINIMUM PRICE INTERVALS:	\$1.00 per bitcoin (equal to \$0.01 per contract).		
FUNDING AMOUNT (DAILY	The Funding Amount is a daily cash adjustment applied daily to open		

CASH ADJUSTMENT):	<p>positions in a PBT futures contract. Further detail regarding the Funding Amount calculation is included in the Cboe Continuous Futures Funding Amount Methodology.</p> <p>The Funding Amount is calculated once per day at 3:00 p.m. Chicago time and applied to all open positions as of the close of trading at 4:00 p.m. Chicago time. On the final settlement date of an expiring PBT futures contract, a final Funding Amount is calculated at 10:00 a.m. Chicago time (described below in the Final Funding Amount section).</p> <p>The Funding Amount is stated in USD.</p> <p>The Funding Amount (<i>FA</i>) is applied to a net position of <i>N</i> contracts, where a long net position is positive and a short net position is negative, multiplied by a per-contract Funding Amount (<i>PCFA</i>), pursuant to the following formula:</p> $FA = N * PCFA$ <p>The PCFA is calculated using the daily settlement value of the applicable PBT futures contract, multiplied by its contract size (0.01), multiplied by the Funding Rate, multiplied by -1. The PCFA will be rounded to the nearest even penny (utilizing banker's rounding).</p> <p>The Funding Rate is a weighted average of the variance between the PBT futures contract price and the value of the Cboe Kaiko Bitcoin Real-Time Rate ("Basis"), computed once per minute throughout a trading day from 5:00 p.m. Chicago time (previous day) until 3:00 p.m. Chicago time. A clamp will be applied to the Funding Rate that limits the Funding Rate value to not be less than a minimum clamp value of -0.002 and to not exceed a maximum clamp value of 0.002.</p> <p>If the midpoint normalized bid-ask spread (<i>MNBAS</i>), as defined in the Cboe Continuous Futures Funding Amount Methodology, at the end of a minute exceeds 0.005, then a valid PBT futures price does not exist for the purpose of calculating a Basis and a valid Basis value for the minute will not be calculated. In that case, a Basis value for that minute will not be included in the Funding Rate calculation.</p>
TRADE AT SETTLEMENT TRANSACTIONS:	Trade at Settlement ("TAS") transactions are not permitted in PBT futures.
CROSSING:	The eligible size for an original Order that may be entered for a cross trade with one or more other original Orders pursuant to Rule 407 is one contract. The Trading Privilege Holder or Authorized Trader, as applicable, must expose to the market for at least five seconds under Rule 407(a) at least one of the original Orders that it intends to cross.
PRE-EXECUTION DISCUSSIONS	The Order Exposure Period under Policy and Procedure IV before an Order may be entered to take the other side of another Order with respect to which there has been pre-execution discussions is five seconds after the first Order was entered into the CFE System.
EXCHANGE OF CONTRACT	Exchange of Contract for Related Position ("ECRP") transactions

FOR RELATED POSITION TRANSACTIONS:	may not be entered into with respect to PBT futures.
BLOCK TRADES:	<p>Block Trades may be entered into in PBT futures. Any Block Trade must satisfy the requirements of Rule 415.</p> <p>The minimum Block Trade quantity for PBT futures is 250 contracts.</p> <p>The minimum price increment for Block Trades in PBT futures is \$0.01.</p> <p>Block Trades in PBT futures may not be executed as Spread Orders.</p>
NO-BUST RANGE:	The CFE error trade policy may only be invoked for a trade price that is greater than 1% on either side of the market price of the applicable PBT futures Contract. In accordance with Policy and Procedure III, the Trade Desk will determine what the true market price for the relevant Contract was immediately before the potential error trade occurred. In making that determination, the Trade Desk may consider all relevant factors, including the last trade price for such Contract, a better bid or offer price, a more recent price in a different contract expiration, and the prices of related contracts trading on the Exchange or other markets.
TERMINATION OF TRADING:	Trading hours in an expiring PBT futures contract end at 10:00 a.m. Chicago time on its final settlement date.
FINAL SETTLEMENT DATE:	<p>The final settlement date for a PBT futures contract is the last Friday of the calendar month in the calendar year denoted by the ticker symbols of the contract. This date is the last Friday of the 120th month from the month the PBT futures contract is listed for trading.</p> <p>Example: PBTV35 Listing Date: October 6, 2025 Final Settlement Date: October 26, 2035</p> <p>If the final settlement date is a CFE holiday, the final settlement date shall be the business day immediately preceding the holiday.</p>
FINAL SETTLEMENT VALUE:	<p>The final settlement value of an expiring PBT futures contract shall be the value of the Cboe Kaiko Bitcoin Hourly Rate, as determined by Kaiko, at 10:00 a.m. Chicago time on the final settlement date of that PBT futures contract.</p> <p>If the Exchange concludes that the final settlement value of an expiring PBT futures contract determined in the foregoing manner does not fairly represent the market value of the price of bitcoin in U.S. dollars at the time of determination of the final settlement value, the Exchange may determine an alternative final settlement value for the PBT futures contract. That determination may be based upon, among other things, one or more third party index(es) or reference price(s) that reflect the price of bitcoin in U.S. dollars.</p> <p>If a final settlement value is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other</p>

	<p>unusual circumstance, the final settlement value on a PBT futures contract will be determined in accordance with the Rules of Cboe Clear U.S., LLC.</p> <p>The final settlement value will be rounded to the nearest \$1.00.</p>
FINAL FUNDING AMOUNT:	At 10:00 a.m. Chicago time on the final settlement date of an expiring PBT futures contract, a Final Funding Amount for that PBT futures contract will be calculated using a PCFA calculated by using the final settlement value of that PBT futures contract, multiplied by its contract size (0.01), multiplied by the Funding Rate, multiplied by -1.
DELIVERY:	<p>Settlement of a PBT futures contract will result in the delivery of a cash settlement amount in accordance with the Rules of Cboe Clear U.S., LLC.</p> <p>The cash settlement amount on the final settlement date shall include (i) the final mark-to-market amount against the final settlement value of the PBT futures contract multiplied by 0.01 and (ii) the Final Funding Amount.</p>
POSITION LIMITS:	<p>PBT futures are subject to position limits under Rule 412.</p> <p>A Person may not own or control more than 850,000 contracts net long or net short in all PBT futures contract expirations combined.</p> <p>For the purposes of Rule 412, positions in PBT futures shall be aggregated in accordance with Rule 412(e).</p> <p>The foregoing position limit shall not apply to positions that are subject to a position limit exemption meeting the requirements of Commission Regulations and CFE Rules.</p>
REPORTABLE POSITION LEVEL:	25 contracts.
FORKS	In the event that bitcoin experiences a fork, the form of bitcoin on which all then currently listed and subsequently listed PBT futures contracts and their final settlement values will be based is the form of bitcoin that is used by Kaiko to calculate the Cboe Kaiko Bitcoin Index following the fork.

EXHIBIT 2

The Amendment, marked to show additions in underlined text and deletions in ~~stricken~~ text, consists of the following:

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Cboe Futures Exchange, LLC Rulebook

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CHAPTER 27 CBOE BITCOIN CONTINUOUS FUTURES CONTRACT SPECIFICATIONS

2701. Scope of Chapter

This chapter applies to trading in Cboe Bitcoin Continuous Futures. The procedures for trading, clearing, settlement and any other matters not specifically covered in this chapter are governed by the generally applicable rules of the Exchange. PBT futures were first listed for trading on the Exchange on _____.

2702. Contract Specifications

(a) *Schedule and Prohibit Order Types.* The Exchange may list for trading up to three 120-month expirations for the PBT futures contract. A PBT future contract with a 120-month expiration will expire 120 months from the month the PBT futures contract is initially listed for trading.

The final settlement date for a PBT futures contract is the last Friday of the calendar month in the calendar year denoted by the ticker symbols of the contract. If the final settlement date is a CFE holiday, the final settlement date shall be the Business Day immediately preceding the holiday.

The trading hours for PBT futures are set forth in the charts below. The trading hours for PBT futures during extended trading hours and regular trading hours constitute a single trading session for a Business Day. All times set forth in the charts below are in Chicago time.

Trading Week with No Exchange Holiday. Unless otherwise specified below in relation to Exchange holidays, the following schedule applies.

<u>Type of Trading Hours</u>	<u>Monday – Friday</u>
<u>Extended</u>	<u>5:00 p.m. (previous day) to 8:30 a.m.</u>
<u>Regular</u>	<u>8:30 a.m. to 3:00 p.m.</u>

<u>Extended</u>	<u>3:00 p.m. to 4:00 p.m.</u>
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Domestic Holidays Always Observed on Mondays. The below schedule applies when the following domestic holidays are observed: Martin Luther King, Jr. Day, Presidents' Day, Memorial Day and Labor Day.

<u>Type of Trading Hours</u>	<u>Monday</u>	<u>Tuesday</u>
<u>Extended</u>	<u>None</u>	<u>5:00 p.m. (Monday) to 8:30 a.m. and 3:00 p.m. to 4:00 p.m.</u>
<u>Regular</u>	<u>None</u>	<u>8:30 a.m. to 3:00 p.m.</u>

Thanksgiving. The below schedule applies when the Thanksgiving Day holiday is observed.

<u>Type of Trading Hours</u>	<u>Thanksgiving</u>	<u>Friday</u>
<u>Extended</u>	<u>None</u>	<u>5:00 p.m. (Thursday) to 8:30 a.m.</u>
<u>Regular</u>	<u>None</u>	<u>8:30 a.m. to 12:00 p.m.</u>

Floating Holidays and Good Friday. The below schedules apply when the following holidays are observed: New Year's Day, Good Friday, Juneteenth National Independence Day (June 19), Independence Day (July 4) and Christmas Day. If the holiday falls on a Saturday, the holiday will be observed on the previous day (Friday), except for New Year's Day. If the holiday falls on a Sunday, the holiday will be observed on the next day (Monday). The holidays specified in the below charts refer to the day on which the Exchange observes the applicable holiday. Regular trading hours will typically end at 12:00 p.m. on July 3 (the day before Independence Day) and December 24 (Christmas Eve). Holiday closures and shortened holiday trading hours will be announced by circular.

If New Year's Day or Christmas is on a Monday - Thursday:

<u>Holiday</u>	<u>Type of Trading Hours</u>	<u>Holiday Observed (Monday – Thursday)</u>
<u>New Year's Day and Christmas</u>	<u>Extended</u>	<u>5:00 pm. (on holiday) to 8:30 a.m. (day after holiday) and 3:00 p.m. to 4:00 p.m. (day after holiday)</u>
<u>New Year's Day and Christmas</u>	<u>Regular</u>	<u>8:30 a.m. to 3:00 p.m. (day after holiday)</u>

If New Year's Day or Christmas is on a Friday:

<u>Holiday</u>	<u>Type of Trading Hours</u>	<u>Holiday Observed (Friday)</u>
<u>If New Year's Day or Christmas on Friday</u>	<u>Extended</u>	<u>None</u>
<u>If New Year's Day or Christmas on Friday</u>	<u>Regular</u>	<u>None</u>

Good Friday:

<u>Holiday</u>	<u>Type of Trading Hours</u>	<u>Friday</u>
<u>Good Friday</u>	<u>Extended</u>	<u>None</u>
<u>Good Friday</u>	<u>Regular</u>	<u>None</u>

Juneteenth:

<u>Type of Trading Hours</u>	<u>Holiday Observed</u>	<u>Business Day After Holiday Observed</u>
<u>Extended</u>	<u>None</u>	<u>5:00 p.m. (on holiday or on Sunday if holiday observed on Friday) to 8:30 a.m. and 3:00 p.m. to 4:00 p.m.</u>
<u>Regular</u>	<u>None</u>	<u>8:30 a.m. to 3:00 p.m.</u>

Independence Day:

<u>Type of Trading Hours</u>	<u>Holiday Observed</u>	<u>Business Day After Holiday Observed</u>
<u>Extended</u>	<u>None</u>	<u>5:00 p.m. (on holiday or on Sunday if holiday observed on Friday) to 8:30 a.m. and 3:00 p.m. to 4:00 p.m.</u>
<u>Regular</u>	<u>None</u>	<u>8:30 a.m. to 3:00 p.m.</u>

Spread Orders are not permitted in PBT futures.

(b) Contract Size. The contract size and unit of trading of a PBT futures contract is 0.01 bitcoin.

(c) Pricing Conventions. Prices in PBT futures are stated in U.S. dollars (USD) per 1 bitcoin.

(d) Contract Multiplier. The contract multiplier for PBT futures is 0.01. For example, a contract size of one PBT futures contract would be \$800 if the level of the Cboe Kaiko Bitcoin Real-Time Rate ("CKBRT") level was \$80,000 ($\$80,000 \times 0.01$).

(e) Minimum Increments. The minimum fluctuation in PBT futures is \$1.00 per bitcoin, which has a value of \$0.01 per contract.

(f) Position Limits. PBT futures are subject to position limits under Rule 412.

A Person may not own or control more than 850,000 contracts net long or net short in all PBT futures contract expirations combined.

For the purposes of this Rule, PBT futures positions shall be aggregated in accordance with Rule 412(e).

The foregoing position limit shall not apply to positions that are subject to a position limit exemption meeting the requirements of Commission Regulations and CFE Rules.

(g) Termination of Trading. Trading hours in an expiring PBT futures contract end at 10:00 a.m. Chicago time on its final settlement date.

(h) Contract Modifications. Specifications are fixed as of the first day of trading of a contract. If any U.S. government agency or body issues an order, ruling, directive or law that conflicts with the requirements of these rules, such order, ruling, directive or law shall be construed to take precedence and become part of these rules, and all open and new contracts shall be subject to such government orders.

(i) Execution Priorities. Pursuant to Rule 406(a)(i), the base allocation method of price-time priority shall apply to trading in PBT futures.

(j) Crossing Two Original Orders. The eligible size for an original Order that may be entered for a cross trade with one or more other original Orders pursuant to Rule 407 is one contract. The Trading Privilege Holder or Authorized Trader, as applicable, must expose to the market for at least five seconds under Rule 407(a) at least one of the original Orders that it intends to cross.

(k) Price Limits and Halts.

(i) Price Limits. Pursuant to Rule 413, PBT futures are subject to the following price limits during regular and extended trading hours to the extent set forth below:

(A) Each single leg PBT futures contract shall have price limits

that are at an initial 20% interval and subsequent 10% intervals above the PBT Reference Price for that PBT futures contract (each an “Upper Price Limit”) and price limits that are at an initial 20% and subsequent 10% intervals below the PBT Reference Price for that PBT futures contract (each a “Lower Price Limit”). An Upper Price Limit and a Lower Price Limit may also be referred to as a “Price Limit.”

(B) Price Limits shall be in effect during the following time frames on a Business Day:

(1) When the most recent daily settlement prices for PBT futures contracts were established on the calendar day of the start of that Business Day, the price limit provisions of this Rule 2702(k)(i):

(aa) shall be applicable during any opening process for each single leg PBT futures contract on that Business Day, and

(bb) shall be applicable during the remainder of the Business Day,

(cc) subject to Rule 2702(k)(i)(B)(3) below.

(2) When the most recent daily settlement prices for PBT futures contracts were established on an earlier calendar day than the calendar day of the start of that Business Day, the price limit provisions of this Rule 2702(k)(i):

(aa) shall not be applicable on that Business Day for a single leg PBT futures contract until the PBT Reference Price for that contract has been established by or following the initial opening process on that Business Day, and

(bb) shall be applicable during the remainder of that Business Day,

(cc) subject to Rule 2702(k)(i)(B)(3) below.

(3) In the event that there is a previously designated suspension period within a holiday trading session on that Business Day, the price limit provisions of this Rule 2702(k)(i):

(aa) shall not be applicable for any single leg PBT futures contract following the commencement of the previously designated suspension period until the PBT Reference Price for that contract has been established by or following the initial opening process after that suspension period, and

(bb) shall then be applicable during the remainder of that Business Day.

(C) The following describes the process for the adjustment of Price Limit levels during the time frames in which Price Limits are in effect on a Business Day:

(1) If during Trading Hours outside of an opening process the best bid for a single leg PBT futures contract is at the initial 20% Upper Price Limit or the best offer for a single leg PBT futures contract is at the initial 20% Lower Price Limit, the Trade Desk will retain the Price Limit at that Price Limit level for a minimum of two additional minutes.

(2) The Trade Desk may then adjust the applicable Price Limit to the next 10% Upper Price Limit level in the case of this occurrence with an Upper Price Limit and may then adjust the applicable Price Limit to the next 10% Lower Price Limit level in the case of this occurrence with a Lower Price Limit.

(3) If during Trading Hours outside of an opening process the best bid for a single leg PBT futures contract is then at the next 10% Upper Price Limit or the best offer for a single leg PBT futures contract is then at the next 10% Lower Price Limit, the Trade Desk will retain the Price Limit at that Price Limit level for a minimum of five additional minutes.

(4) The process described in Rule 2702(k)(i)(C)(2) and (3) will then continue for the remainder of the applicable Business Day.

(D) When Price Limits are in effect during a Business Day:

(1) The CFE System will reject or cancel back to the sender any Limit Order to buy with a limit price that is above the Upper Price Limit and any Limit Order to sell with a limit price that is below the Lower Price Limit.

(2) The CFE System will reject or cancel back to the sender any portion of a Market Order to buy that would execute at a price that is above the Upper Price Limit and any portion of a Market Order to sell that would execute at price that is below the Lower Price Limit.

(3) The CFE System will not consummate the execution of any trade that is at a price that is more than the Upper Price Limit or that is less than the Lower Price Limit.

(4) Upon the triggering of a Stop Limit Order, the CFE System will cancel the Stop Limit Order back to the sender if it is a Stop Limit Order to buy that is triggered to a limit price which is above the Upper Price Limit or is a Stop Limit Order to sell that is triggered to a limit price which is below the Lower Price Limit.

(E) The PBT Reference Price for each single leg PBT futures contract on a Business Day shall be determined in the following manner:

(1) For any single leg PBT futures contract for which the most recent daily settlement price was established on the calendar day of the start of that Business Day, the PBT Reference Price will be daily settlement price of that PBT futures contract on the prior Business Day (subject to Rule 2702(k)(i)(F)(3) below).

(2) For any single leg PBT futures contract for which the most recent daily settlement price was established on an earlier calendar day than the calendar day of the start of that Business Day, the PBT Reference Price will be the first trade price of that PBT futures contract established by or following the initial opening process on that Business Day (subject to Rule 2702(k)(i)(F)(3) below).

(3) If a Business Day includes a previously designated suspension period within a holiday trading session on that Business Day, the PBT Reference Price following the designated suspension period will be the first trade price of that PBT futures contract established by or following the initial opening process after that suspension period.

(4) The first trade price of a single leg PBT futures contract established by or following an opening process will be established by a trade between two single leg Orders.

(F) The PBT Reference Price for a single leg PBT futures contract shall be determined in the following manner when it is initially listed for trading:

(1) The PBT Reference Price that will be utilized for a single leg PBT futures contract when it is initially listed for trading will be the PBT Reference Price of the single leg PBT futures contract with the nearest expiration date in calendar days to the expiration date of the newly listed PBT futures contract (subject to Rule 2702(k)(i)(G)(3) below).

(2) If there is a single leg PBT futures contract with an earlier expiration date and a single leg PBT futures contract with a later expiration date that each meet the above criterion, the PBT Reference Price for the PBT futures contract with the earlier expiration date will be utilized (subject to Rule 2702(k)(i)(G)(3) below).

(3) If the most recent daily settlement prices for previously listed PBT futures contracts were established on an earlier calendar day than the calendar day of the initial listing of the applicable single leg PBT futures contract or if no PBT futures contracts were listed for trading on the date prior to the listing date of

a single leg PBT futures contract, the initial PBT Reference Price for that PBT futures contract will be the first trade price of that PBT futures contract established by or following the initial opening process for that PBT futures contract.

(G) In calculating a Price Limit, the calculation will be rounded to the nearest minimum increment in the PBT futures contract, with the midpoint between two consecutive increments rounded up.

(H) Notwithstanding any provisions of this Rule 2702(k)(i), the Trade Desk may, in its absolute and sole discretion, take any action it determines necessary to protect market integrity. For avoidance of doubt, this authority includes, but is not limited to, modifying or eliminating the Price Limit parameters in this Rule 2702(k)(i) at any time. Among others, one type of situation in which the Trade Desk may determine to modify or eliminate Price Limit parameters in this Rule 2702(k)(i) is during the last 15 minutes of trading on a Business Day. The senior person in charge of the Trade Desk may exercise the authority of the Trade Desk under Rule 2702(k)(i)(C) and this Rule 2702(k)(i)(I). The Trade Desk will promptly issue an alert with respect to actions taken pursuant to Rule 2702(k)(i)(C) or this Rule 2702(k)(i)(I).

(ii) Inapplicability of Circuit Breaker Halts. The provisions of Rule 417A are not applicable to PBT futures.

(l) Exchange of Contract for Related Position. Exchange of Contract for Related Position transactions, as set forth in Rule 414, may not be entered into with respect to PBT futures.

(m) Block Trades. Pursuant to Rule 415(a)(i), the minimum Block Trade quantity for PBT futures is 250 contracts. Block Trades in PBT futures may not be executed as Spread Orders. Any Block Trade must satisfy the requirements of Rule 415.

The minimum price increment for a Block Trade in PBT futures is \$0.01.

(n) No-Bust Range. Pursuant to Rule 416, the CFE error trade policy may only be invoked for a trade price that is greater than 1% on either side of the market price of the applicable PBT futures contract. In accordance with Policy and Procedure III, the Trade Desk will determine what the true market price for the relevant PBT futures contract was immediately before the potential error trade occurred. In making that determination, the Trade Desk may consider all relevant factors, including the last trade price for that PBT futures contract, a better bid or offer price, a more recent price in a different contract month and the prices of related contracts trading in other markets.

(o) Pre-execution Discussions. The Order Exposure Period under Policy and Procedure IV before an Order may be entered to take the other side of another Order with respect to which there has been pre-execution discussions is five seconds after the first Order was entered into the CFE System.

(p) Reportable Position and Trading Volume.

(i) Reportable Position. Pursuant to Commission Regulation §15.03 and Commission Regulation Part 17, the position level that is required to be reported to the

Commission is any open position in PBT futures contracts at the close of trading on any trading day equal to or in excess of 25 contracts on either side of the market.

(ii) Reportable Trading Volume. Pursuant to Commission Regulation §15.04 and Commission Regulation Part 17, the reportable trading volume that triggers the requirement to report a volume threshold account to the Commission is 50 or more PBT futures contracts during a single trading day or such other reportable trading volume threshold as may be designated by the Commission.

(q) Threshold Widths. For purposes of Rule 513A(e) and Rule 513A(f), 0.5% is the percentage used to determine the percentage of the mid-point between the highest bid and lowest offer in each PBT futures contract for purposes of calculating the Threshold Width in that PBT futures contract.

(r) Daily Settlement Price. The daily settlement price for a PBT futures contract is calculated in the following manner for each Business Day:

(i) Daily Settlement Time.

(A) The Daily Settlement Time for PBT futures is the point in time in relation to which the daily settlement price of a PBT futures contract is calculated.

(B) The Daily Settlement Time for PBT futures is at the close of regular trading hours in PBT futures on a Business Day (except that the Daily Settlement Time for PBT futures on a Business Day that ends at 12:15 p.m. Chicago time is at 12:00 p.m. Chicago time.) Accordingly, on a normal Business Day, the Daily Settlement Time for PBT futures is 3:00 p.m. Chicago time.

(ii) VWAP.

(A) The daily settlement price for a PBT futures contract will be the volume weighted average price ("VWAP") during the Measurement Interval if:

(1) the number of Qualifying Transactions during the Measurement Interval is greater than or equal to the VWAP Transaction Minimum; and

(2) the number of Qualifying Contracts Traded during the Measurement Interval is greater than or equal to the VWAP Contract Minimum.

(B) The VWAP for a PBT futures contract is calculated in the following manner:

(1) For each Qualifying Transaction in the PBT futures contract that occurs during the Measurement Interval, the execution price is multiplied by the number of contracts traded to determine a Weighted Price for the Qualifying Transaction.

(2) The Weighted Price of all Qualifying Transactions in the PBT futures contract during the Measurement Interval are summed to determine the Gross Weighted Price.

(3) The Gross Weighted Price is divided by the Qualifying Contracts Traded during the Measurement Interval to determine the VWAP.

(C) For purposes of determining a daily settlement price for a PBT futures contract:

(1) The Measurement Interval is the final 60 seconds prior to the Daily Settlement Time for PBT futures.

(2) The VWAP Transaction Minimum is 1 Qualifying Transaction.

(3) The VWAP Contract Minimum is 1 Qualifying Contract Traded.

(4) The following describes the types of transactions that constitute Qualifying Transactions and Qualifying Contracts Traded:

(aa) Only transactions resulting from the execution of simple Orders, including simple Order transactions that occur when simple Orders execute against a Spread Order, are included in the VWAP calculation and are counted for purposes of determining whether the VWAP Transaction Minimum and the VWAP Contract Minimum have been satisfied.

(bb) Transactions involving the execution of a Spread Order against another Spread Order, Trade at Settlement transactions, Exchange of Contract for Related Position transactions and Block Trades are not included in the VWAP calculation and are not counted for purposes of determining whether the VWAP Transaction Minimum and the VWAP Contract Minimum have been satisfied.

(D) Trade busts and adjustments pursuant to Policy and Procedure III are addressed in the following manner:

(1) If a Qualifying Transaction occurs during the Measurement Interval and is busted or adjusted during the Measurement Interval, the bust or adjustment is accounted for in the VWAP calculation and for purposes of determining whether the VWAP Transaction Minimum and the VWAP Contract Minimum have been satisfied.

(2) If a Qualifying Transaction occurs outside of the

Measurement Interval and is busted or adjusted during the Measurement Interval, the bust or adjustment is not taken into consideration for purposes of the VWAP calculation or determining whether the VWAP Transaction Minimum and the VWAP Contract Minimum have been satisfied.

(3) If a Qualifying Transaction occurs during the Measurement Interval and is busted or adjusted after the Measurement Interval, the original transaction is included the VWAP calculation and for purposes of determining whether the VWAP Transaction Minimum and the VWAP Contract Minimum have been satisfied. In this event, the Exchange may, in its sole discretion, take the bust or adjustment into consideration in determining whether to exercise its authority under Rule 2002(r)(v) and in connection with making any determination under that paragraph.

(iii) *TWAP of Best Bid and Best Offer Midpoints.*

(A) If the number of Qualifying Transactions during the Measurement Interval is less than the VWAP Transaction Minimum or the number of Qualifying Contracts Traded during the Measurement Interval is less than the VWAP Contract Minimum:

(1) The daily settlement price for a PBT futures contract is the time weighted average price (“TWAP”) of best bid and best offer midpoint values in the PBT futures contract during the Measurement Interval, provided that the requirement in Rule 2002(r)(iii)(A)(3) is satisfied.

(2) The TWAP for a PBT futures contract is calculated using only subsegments of the Measurement Interval during which there is both a two-sided market in the PBT futures contract and the Spread Width Percentage between the best bid and best offer in the PBT futures contract is 0.5% or less. All other subsegments of the Measurement Interval are ignored for the purpose of the TWAP calculation. The midpoint values during qualifying subsegments are weighted in calculating the TWAP by the amount of time during those subsegments that each midpoint value existed.

(3) The Spread Width Percentage between the best bid and best offer in a PBT futures contract is calculated by the following formula:

$$\text{Spread Width Percentage} = \frac{\text{Best Offer} - \text{Best Bid}}{(\text{Best Offer} + \text{Best Bid}) \div 2}$$

(3) In order for the TWAP described above to be used as the daily settlement price for a PBT futures contract, the total length of the qualifying subsegments must be at least 50% of the Measurement Interval.

(4) For purposes of determining the daily settlement price of a PBT futures contract, a two-sided market refers to a market in a PBT futures contract that simultaneously includes both a pending bid with a non-zero value and a pending offer with a non-zero value. If a two-sided market includes either no bid or no offer, it is not a two-sided market for these purposes

(iv) *Kaiko Index Value Calculation.*

(A) If the requirements above for using the VWAP and for using the TWAP of best bid and offer midpoints as the daily settlement price for a PBT futures contract are not satisfied:

(1) If the applicable Business Day is not the first Business Day on which the PBT futures contract has been offered for trading, the daily settlement price of the PBT futures contract is the value of the CKBRT at the Daily Settlement Time on the applicable Business Day adjusted by the difference between the value of the CKBRT at the Daily Settlement Time on the preceding Business Day and the daily settlement price of the PBT futures contract on the preceding Business Day. This difference is referred to as the Prior Differential.

(aa) The Prior Differential is subtracted from the value of the CKBRT at the Daily Settlement Time on the applicable Business Day to determine the daily settlement price of the PBT futures contract on that Business Day if the level of the CKBRT value at the Daily Settlement Time on the preceding Business Day was greater than the daily settlement price of the PBT futures contract on the preceding Business Day.

(bb) The Prior Differential is added to the value of the CKBRT at the Daily Settlement Time on the applicable Business Day to determine the daily settlement price of the PBT futures contract on that Business Day if the level of the CKBRT value at the Daily Settlement Time on the preceding Business Day was less than the daily settlement price of the PBT futures contract on the preceding Business Day.

(2) If the applicable Business Day is the first Business Day on which the PBT futures contract has been offered for trading, the daily settlement price of the PBT futures contract is the value of the CKBRT at the Daily Settlement Time on the applicable Business Day.

(v) *Exchange Determination.*

(A) The Exchange may in its sole discretion establish a daily settlement price for a PBT futures contract that it deems to be a fair and reasonable reflection of the market if:

(1) the Exchange determines in its sole discretion that the daily settlement price determined by the parameters set forth in Rule 2702(r)(ii) through Rule 2702(r)(iv) is not a fair and reasonable reflection of the market; or

(2) there is a trading halt in the PBT futures contract or other unusual circumstance at or around the Daily Settlement Time.

(B) The Exchange may exercise the authority in this Rule 2702(r)(v) either before or after a daily settlement price determined by the parameters set forth in Rule 2702(r)(ii) through Rule 2702(r)(iv) has initially been determined and disseminated.

(vi) *Rounding*

(A) The daily settlement price calculation will be rounded to the nearest minimum increment in the PBT futures contract, with the midpoint between two consecutive increments rounded up.

(s) *Trade at Settlement Transactions.* Trade at Settlement (“TAS”) transactions pursuant to Rule 404A are not permitted in PBT futures.

(t) *Price Reasonability Checks.* The Limit Order price reasonability percentage parameters designated by the Exchange for PBT futures pursuant to Rule 513A(d) shall be 5%.

The Market Order price reasonability percentage parameters designated by the Exchange for PBT futures pursuant to Rule 513A(e) shall each be 2%.

(u) *Daily Cash Adjustment.*

(i) *Funding Amount.* The Funding Amount is a daily cash adjustment applied daily to open positions in a PBT futures contract.

Further detail regarding the Funding Amount methodology is included in the Cboe Continuous Futures Funding Amount Methodology.

The Funding Amount is stated in USD.

(ii) *Funding Amount Calculation.*

(A) The Funding Amount is calculated once per day at 3:00 p.m. Chicago time and applied to all open positions as of the close of trading at 4:00 p.m. Chicago time (except that the Funding Amount on a Business Day that ends at 12:15 p.m. Chicago time is calculated and applied at 12:00 p.m. Chicago time). On the final settlement date of an expiring PBT futures contract, a final Funding Amount is calculated at 10:00 a.m. Chicago time, pursuant to Rule 2703.

(B) The Funding Amount (*FA*) is applied to a net position of *N* contracts, where a long net position is positive and a short net position is negative, multiplied by a per-contract Funding Amount (*PCFA*), pursuant to

the following formula: $FA = N * PCFA$.

(B) The Funding Rate.

(1) The PCFA is calculated using the daily settlement price of that PBT futures contract, multiplied by its contract size (0.01), multiplied by the Funding Rate, multiplied by -1. The PCFA will be rounded to the nearest even penny (utilizing banker's rounding).

(2) The Funding Rate is a weighted average of the variance between the PBT futures contract price and the value of the CKBRT ("Basis"), computed once per minute throughout a trading day from 5:00 p.m. Chicago time (previous day) until 3:00 p.m. Chicago time.

(3) A clamp will be applied to the Funding Rate that limits the Funding Rate value to not be less than a minimum clamp value of -0.002 and to not exceed a maximum clamp value of 0.002.

(4) The PBT futures contract price used to calculate the Basis during each minute will be the last trade price of the current trade date for a PBT futures contract, regardless of whether the last trade occurred within the current minute, if the last trade price is within the prevailing best bid and best offer price (prevailing bid-ask spread) at the end of the minute.

(a) If the last trade price is outside of the prevailing bid-ask spread at the end of the minute, then the futures price will be the mid-point of the prevailing bid-ask spread at the end of the minute.

(b) If the last trade price is outside the prevailing bid-ask spread or a trade has not occurred in the FBT futures contract during the applicable trading day prior to the end of the minute, the midpoint of the prevailing bid-ask spread at the end of the minute is used.

(c) For these purposes, the prevailing bid-ask spread is the last valid two-sided market within the minute. A valid two-sided market includes both a pending bid with a non-zero value and a pending offer with a non-zero value. A two-sided market will not be considered valid if it includes either no bid or no offer.

(d) If a valid two-sided market does not exist within the current minute, then a valid Basis value for the current minute cannot be calculated, and a Basis value for that minute will not be included in the Funding Rate calculation.

If the midpoint normalized bid-ask spread, as defined in the Cboe Continuous Futures Funding Amount Methodology, at the end of a minute exceeds 0.005, then a valid futures price does not exist for

this purpose and a valid Basis value for the current minute cannot be calculated. In that case, a Basis value for that minute will not be included in the Funding Rate calculation.

(iii) Exchange Determination. The Exchange may in its sole discretion establish a Funding Amount for a PBT futures contract that it deems to be a fair and reasonable reflection of the market if the Exchange determines in its sole discretion that the Funding Amount determined by the methodology set forth in the Cboe Continuous Futures Funding Amount Methodology is not a fair and reasonable reflection of the market. The Exchange may exercise the authority in this Rule 2702(u)(iii) either before or after a Funding Amount is determined by the methodology set forth in the Cboe Continuous Futures Funding Amount Methodology has initially been determined and disseminated.

2703. Clearance and Settlement

The Clearing House for transactions in PBT futures is CCUS.

The final settlement value of an expiring PBT futures contract shall be the value of the Cboe Kaiko Bitcoin Rate, as determined by Kaiko, at 10:00 a.m. Chicago time on the final settlement date of that PBT futures contract.

If the Exchange concludes that the final settlement value of an expiring PBT futures contract determined in the foregoing manner does not fairly represent the market value of the price of bitcoin in U.S. dollars at the time of determination of the final settlement value, the Exchange may determine an alternative final settlement value for the PBT futures contract. That Exchange determination may be based upon, among other things, one or more third party index(es) or reference price(s) that reflect the price of bitcoin in U.S. dollars.

If a final settlement value is not available or the normal settlement procedure cannot be utilized due to a trading disruption or other unusual circumstance, the final settlement value of a PBT futures contract will be determined in accordance with the Rules of CCUS.

The final settlement value will be rounded to the nearest \$1.00.

At 10:00 a.m. Chicago time on the final settlement date of an expiring PBT futures contract, a Final Funding Amount for that PBT futures contract will be calculated pursuant to Rule 2702(u) and the Cboe Continuous Futures Funding Amount Methodology using a PCFA calculated by using the final settlement value of that PBT futures contract, multiplied by its contract size (0.01), multiplied by the Funding Rate, multiplied by -1.

Settlement of a PBT futures contract will result in the delivery of a cash settlement amount in accordance with the Rules of CCUS. The cash settlement amount on the final settlement date shall include (i) the final mark-to-market amount against the final settlement value of the PBT futures contract multiplied by 0.01 and (ii) the Final Funding Amount.

Clearing Members holding open positions in a PBT futures contract at the termination of trading in that PBT futures contract shall make payment to or receive payment from the Clearing House in accordance with normal margin and other obligation payment procedures based on the cash settlement amount on the final settlement date.

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Choe Futures Exchange, LLC
Policies and Procedures Section of Rulebook

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Policy and Procedure V. Emergency and Physical Emergency Delegations and Procedures
(Rules ~~135 and~~ 418)

A. *Specific Emergency and Physical Emergency Delegations*

1. Emergency Delegations

Chapter 1 defines the term “Emergency” and provides a non-exclusive list of circumstances that may constitute an Emergency.

Rule 418(a) grants the President or any individual designated by the President the authority to determine on behalf of the Board the existence of an Emergency and the authority to take actions in response to an Emergency, including all of the actions listed below. The President or the President’s designee may also order the removal of any restriction previously imposed based upon a determination that the Emergency no longer exists or has sufficiently abated to permit the function of the Exchange to continue in an orderly manner.

Pursuant to Rule 418(a), the following individuals in addition to the President are authorized as designees of the President to determine the existence of an Emergency and to take the actions specified in the delegations below in response to an Emergency. These additional individuals may also order the removal of any restriction that the applicable individual has been delegated the authority to impose based upon a determination by the applicable individual that the Emergency no longer exists or has sufficiently abated to permit the function of the Exchange to continue in an orderly manner.

The Senior Person in Charge of the Trade Desk refers to the individual in charge of the Trade Desk at the applicable time.

Rule	Emergency Actions	Emergency Delegations
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1202(i)(i)(H) 1302(i)(i)(H) 1502(i)(i)(H) 1702(i)(i)(H) 2002(k)(i)(I) 2102(k)(i)(I) <u>2702(k)(i)(H)</u> 418(a)(iv)	Action necessary to protect market integrity, such as imposing or modifying price limits with respect to any Contract	<ul style="list-style-type: none">• Senior Person in Charge of Trade Desk
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Sections A.2. - B. of Policy and Procedure V

No changes.

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Policy and Procedure XIX. Submission Time Frames (Rules 402(c))

All times referenced in this Policy and Procedure are Chicago time.

A. Cboe Volatility Index (“VX”), Mini Cboe Volatility Index (“VXM”), Cboe® iBoxx® iShares® Bond Index (“CB Index”), ~~and~~ Cboe® iBoxx® \$ Emerging Market Bond Index (“IEMD”) Futures, Financially Settled Bitcoin (“FBT”), ~~and~~ Financially Settled Ether (“FET”), and Bitcoin Continuous (“PBT”) Futures Submission Time Frames

The time frames during which Trading Privilege Holders may submit Orders (including Cancel Orders and Cancel Replace/Modify Orders) to the CFE System for VX, VXM, CB Index, IEMD, FBT, ~~and~~ FET, and PBT futures are set forth in the chart below.

Time Frame	Period Type	What May be Submitted to CFE System
4:00 p.m.* to 5:00 p.m. (Sunday)	Queuing Period	Orders (except Market Orders, Immediate or Cancel Orders and Fill or Kill Orders)**
5:00 p.m. (previous day) to 8:30 a.m. (Monday – Friday)	Extended Trading Hours	Orders (except Market Orders in VX, VXM, CB Index, and IEMD futures) Orders (except Market Orders) until 8:00 a.m. in expiring VX or VXM future on its final settlement date
8:30 a.m. to 3:00 p.m. (Monday – Friday)	Regular Trading Hours	Orders (except Market Orders in CB Index, and IEMD futures)
3:00 p.m. to 4:00 p.m. (Monday – Friday)	Extended Trading Hours	Orders (except Market Orders in VX, VXM, CB Index, and IEMD futures)
4:00 p.m. to 4:45 p.m. (Monday – Thursday)	Suspended	Nothing (except Cancel Orders after CFE System restart)

4:45 p.m.* to 5:00 p.m. (Monday – Thursday)	Queuing Period	Orders (except Market Orders, Immediate or Cancel Orders and Fill or Kill Orders)**
4:00 p.m. (Friday) to 4:00 p.m. (Sunday)	Suspended	Nothing (except Cancel Orders after CFE System restart)
5:00 p.m. (previous day) to 3:00 p.m. (Monday – Friday) (Solely for Trade at Settlement (“TAS”) transactions in VX and VXM futures)	Extended and Regular Trading Hours for all types of TAS transactions in VX and VXM futures	<p>TAS Orders are accepted until 3:00 p.m.</p> <p>No TAS Orders are accepted from 3:00 p.m. to 4:45 p.m. (Monday – Thursday)</p> <p>No TAS Orders are accepted from 3:00 p.m. to 4:00 p.m. (Friday)</p> <p>TAS Orders are accepted from 4:00 p.m.*** to 5:00 p.m. during Queuing Period (Sunday) and from 4:45 p.m.*** to 5:00 p.m. during Queuing Period (Monday – Thursday)**</p>
Whenever VX, VXM, CB Index, IEMD, FBT, or <u>FET</u> , or <u>PBT</u> futures are in a queuing period	Queuing Period	Orders (except Market Orders, Immediate or Cancel Orders and Fill or Kill Orders)**
Whenever trading in VX, VXM, CB Index, IEMD, FBT, or <u>FET</u> , or <u>PBT</u> futures is halted	Halted	Nothing (except Cancel Orders)
Whenever trading in VX, VXM, CB Index, IEMD, FBT, or <u>FET</u> , or <u>PBT</u> futures is suspended	Suspended	Nothing (except Cancel Orders after CFE System restart)

*A queuing period for VX, VXM, CB Index, IEMD, FBT, ~~and~~ FET, and PBT non-TAS single leg Contract expirations and non-TAS spreads at the beginning of a Business Day or that otherwise follows

immediately after the CFE System is in a suspended state for that product commences at the referenced start time for the queuing period plus a randomized time period from three to six seconds.

****Orders permitted to be submitted to the CFE System during these times are not executable until extended or regular trading hours next commence or open trading resumes following a trading halt or suspension.**

*****A queuing period for any VX and VXM TAS single leg Contract expirations and TAS spreads at the beginning of a Business Day or that otherwise follows immediately after the CFE System is in a suspended state for that product commences at the referenced start time for the queuing period plus a randomized time period from zero to three seconds.**

B. Submission Time Frames for All Exchange Contracts Other Than VX, VXM, CB Index, IE MD, FBT, ~~and~~ FET, and PBT Futures

The queuing period for any TAS single leg Contract expirations and TAS spreads in Exchange Contracts other than VX and VXM futures commences for each Business Day at 5:00 p.m. on the previous calendar day plus a randomized time period from zero to three seconds. The queuing period for any non-TAS single leg Contract expirations and non-TAS spreads in Exchange Contracts other than VX, VXM, CB Index, IE MD, FBT, ~~and~~ FET, and PBT futures commences for each Business Day at 5:00 p.m. on the previous calendar day plus a randomized time period from three to six seconds.

A queuing period for any TAS single leg Contract expirations and TAS spreads in Exchange Contracts other than VX and VXM futures that follows immediately after the CFE System is in a suspended state for that product other than at the beginning of a Business Day commences at the referenced start time for the queuing period plus a randomized time period from zero to three seconds. A queuing period for any non-TAS single leg Contract expirations and non-TAS spreads in Exchange Contracts other than VX, VXM, CB Index, IE MD, FBT, ~~and~~ FET, and PBT futures that follows immediately after the CFE System is in a suspended state for that product other than at the beginning of a Business Day commences at the referenced start time for the queuing period plus a randomized time period from three to six seconds.

The CFE System accepts Orders (including Cancel Orders and Cancel Replace/Modify Orders) for Exchange Contracts other than VX, VXM, CB Index, IE MD, FBT, ~~and~~ FET, and PBT futures during the queuing period (except for Market Orders, Immediate or Cancel Orders and Fill or Kill Orders). Orders permitted to be submitted to the CFE System during the queuing period are not executable until trading hours next commence.

The trading hours for Exchange Contracts other than VX, VXM, CB Index, IE MD, FBT, ~~and~~ FET, and PBT futures are set forth in the rules governing the applicable Contract. The CFE System accepts Orders (including Cancel Orders and Cancel Replace/Modify Orders) for Exchange Contracts other than VX, VXM, CB Index, IE MD, FBT, ~~and~~ FET, and PBT futures during the respective trading hours for these Contracts (except to the extent set forth in the rules governing the applicable Contract).

C. - F. No changes.

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EXHIBIT 3

Cboe Continuous Futures Funding Amount Methodology

Funding Amount Calculation

The Funding Amount (*FA*) is a daily cash adjustment applied daily to open positions in a Cboe Continuous Futures contract as part of the daily and final settlement processes through Cboe Clear U.S., LLC. The purpose of the daily cash adjustment is to adjust positions in Cboe Continuous Futures as necessary to be representative of a position in the underlying. The magnitude and whether the daily cash adjustment is a debit or credit is a function of the extent to which futures prices deviate from the underlying value and whether the net position is long or short.

The *FA* is applied to a net position of *N* contracts, where a long net position is positive and a short net position is negative, multiplied by a per-contract Funding Amount (*PCFA*), pursuant to the following formula:

$$FA = N * PCFA$$

The *PCFA* is calculated once per day based on the following formula:

$$PCFA = ROUND(-1 * CFR * FDSP * CS)$$

where:

CFR = Clamped Funding Rate

FDSP = Futures Daily Settlement Price¹⁰

CS = Contract Size of the Continuous Futures product

ROUND = Round any half penny to the nearest even penny (utilizing banker's rounding)

The Clamped Funding Rate (*CFR*) is calculated from the Funding Rate (*FR*) with a clamp applied that limits the value to not be less than a product-specific minimum clamp value and to not exceed a product-specific maximum clamp value (e.g., [(0.002), 0.002]).

The *FR* is a weighted average value of the Basis between the futures price and the underlying value computed once per-minute throughout a trading day according to the following formula:

$$FR = \frac{\sum i * Basis(i)}{\sum i}$$

where:

i = Count of the minutes for which a valid Basis value is calculated

¹⁰ On the final settlement date of an expiring Continuous Futures contract, the *FDSP* is equal to the Final Settlement Value.

$$Basis(i) = \frac{FuturesPrice(i) - UnderlyingPrice(i)}{UnderlyingPrice(i)}$$

UnderlyingPrice(i) = The product-specific Cboe-Kaiko Reference Rate value sampled at the end of the i'th minute

FuturesPrice(i) = If the last trade price of the current trade date is within the prevailing best bid and best offer price (prevailing bid-ask spread) at the end of the minute, the last trade price is used, regardless of whether the last trade occurred within the current minute. If the last trade price is outside the prevailing bid-ask spread or a trade has not occurred in the applicable Continuous Futures Contract during the applicable trading day prior to the end of the minute, the midpoint of the prevailing bid-ask spread at the end of the minute is used. For this purpose, the prevailing bid-ask spread is the last valid two-sided market within the minute. A valid two-sided market includes both a pending bid with a non-zero value and a pending offer with a non-zero value. A two-sided market will not be considered valid if it includes either no bid or no offer. If a valid two-sided market does not exist within the current minute, then a valid Basis value for the current minute cannot be calculated, and a Basis value for that minute will not be included in the *FR* calculation.

If the midpoint normalized bid-ask spread (*MNBAS* defined below) at the end of the minute exceeds a product-specific threshold (e.g., 0.005) then a valid futures price does not exist for this purpose and a valid Basis value for the current minute cannot be calculated. In that case, a Basis value for that minute will not be included in the *FR* calculation.

$$MNBAS = \frac{FuturesAsk - FuturesBid}{\frac{FuturesAsk + FuturesBid}{2}}$$

The Contract Size, maximum clamp value, applicable Cboe Kaiko Reference Rate, and MNBAS threshold for a Continuous Futures product may be found in the product specifications for that Continuous Futures product.

The Funding Amount is designed so that, if the incrementally weighted average of the futures price minus the underlying value over the course of a trading date is above (below) the underlying value, then the value of the cash adjustment will be negative (positive) for net long positions.

If the incrementally weighted average of the futures price minus the underlying value over the course of a trading date is above (below) the underlying value, then the value of the cash adjustment will be positive (negative) for net short positions.

Hours, Weekends, Holiday and Market Halts Calculations

Per-minute Basis values will be calculated as inputs to the Funding Amount for a trading day from 5:00 p.m. Chicago time (previous day) until 3:00 p.m. Chicago time:

Type of Trading Hours	Monday – Friday	Per-minute Basis Values Calculated
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Extended	5:00 p.m. (previous day) to 8:30 a.m.	Yes
Regular	8:30 a.m. to 3:00 p.m.	Yes
Extended	3:00 p.m. to 4:00 p.m.	No

Per-minute Basis values will not be calculated when the market is not open in the applicable product, including when the market is not open in that product on weekends, holidays, and during trading halts and suspensions. Per-minute basis calculations will resume when trading resumes following a time frame in which the market is not open in that product. No adjustments will be made to the Basis calculations to account for the time frame in which the market was closed in that product due to a weekend, holiday, or trading halt.

Updates to Methodology

The Funding Amount Methodology may be updated from time to time. Any changes to the Funding Amount Methodology will be communicated via Exchange Notice and are subject to any required regulatory filings.

Funding Calculation Examples

Example Funding Amount for a Positive Funding Rate

CFR	0.00025
FDSP	116,747
CS	0.01
PCFA	0.29

Position (N)	Funding Amount (FA)	Description
1	(\$0.29)	\$0.29 is debited from an account with 1 net long contract
(1)	\$0.29	\$0.29 is credited to an account with 1 net short contract
12	(\$3.48)	\$3.48 is debited from an account with 12 net long contracts
(12)	\$3.48	\$3.48 is credited to an account with 12 net short contracts

Example Funding Amount for a Negative Funding Rate

CFR	(0.00018)
FDSP	118,324
CS	0.01
PCFA	(0.21)

Position (N)	Funding Amount (FA)	Description
1	\$0.21	\$0.21 is credited to an account with 1 net long contract
(1)	(\$0.21)	\$0.21 is debited from an account with 1 net short contract

25	\$5.25	\$5.25 is credited to an account with 25 net long contracts
(25)	(\$5.25)	\$5.25 is debited from an account with 25 net short contracts

Example Use of Futures Spread Midpoint for Basis Calculation

Bid	83,910.30
Ask	83,910.40
MNBAS Threshold	0.005
MNBAS	0.0000012
Last	83,915.00
FuturesPrice(i)	83,910.35

Since the midpoint normalized bid-ask spread (MNBAS) is less than the threshold value of 0.005, a valid futures price can be calculated. Since the last trade price is outside the prevailing bid-ask spread, the midpoint of the bid-ask spread (83,910.35) is the FuturesPrice(i) used in the Basis calculation.

Example Use of Futures Last Price for Basis Calculation

Bid	83,965.80
Ask	83,965.90
MNBAS Threshold	0.005
MNBAS	0.0000012
Last	83,965.80
FuturesPrice(i)	83,965.80

Since the midpoint normalized bid-ask spread (MNBAS) is less than the threshold value of 0.005, a valid futures price can be calculated. Since the last trade price is within the prevailing bid-ask spread, the last trade price (83,965.80) is the FuturesPrice(i) used in the Basis calculation.

Example Sample Weights

In this example, the MNBAS for all 5 samples are within the threshold value of 0.005, thus a valid FuturesPrice(i) value can be calculated for each sample. As a result, the sample weights *i* are incrementing integers with no gaps.

Underlying	Futures Bid	Futures Ask	Futures Last	FuturesPrice(i)	Basis	i
83,916.03	83,910.30	83,910.40	83,915.00	83,910.35	(0.000068)	1
83,983.13	83,965.80	83,965.90	83,965.80	83,965.80	(0.000206)	2
83,990.16	83,986.00	83,986.10	84,000.00	83,986.05	(0.000049)	3
83,999.21	83,994.50	83,994.60	83,994.60	83,994.60	(0.000055)	4
84,048.32	84,007.90	84,008.00	84,007.90	84,007.90	(0.000481)	5

Example Sample Weights When Unable to Calculate a Basis Value

In this example, the MNBAS for the third sample (0.00501) exceeds the threshold value of 0.005, thus a valid FuturesPrice(i) value cannot be calculated for the sample. As a result, a valid Basis value

for the sample does not exist and the sample will not be included in the Funding Rate calculation. In this case the sample weight i for the subsequent sample (3) increments from the value of the previous valid Basis sample (2).

Underlying	Futures Bid	Futures Ask	Futures Last	FuturesPrice(i)	Basis	i
83,916.03	83,910.30	83,910.40	83,915.00	83,910.35	(0.000068)	1
83,983.13	83,965.80	83,965.90	83,965.80	83,965.80	(0.000206)	2
83,990.16	83,566.10	83,986.10	84,000.00	-	-	-
83,999.21	83,994.50	83,994.60	83,994.60	83,994.60	(0.000055)	3
84,048.32	84,007.90	84,008.00	84,007.90	84,007.90	(0.000481)	4

Example of Funding Rate Clamp Application

The Funding Rate calculation may result in a value outside of the product-specific clamp range (e.g., [(0.002), 0.002]), in which case the Funding Rate will be set to the upper or lower clamp based on which clamp is exceeded. In the example below, the funding rate for the third sample exceeds a lower product-specific clamp range value of (0.002) and as a result, the Clamped Funding Rate is set to the lower clamp value of (0.002).

Funding Rate	Clamped Funding Rate
(0.00197614)	(0.00197614)
(0.00195004)	(0.00195004)
(0.00214873)	(0.00200000)