

## SUBMISSION COVER SHEET

**IMPORTANT:** Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 23-068 (3 of 14)

Organization: Chicago Mercantile Exchange Inc. ("CME")

Filing as a:  DCM  SEF  DCO  SDR

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 05/04/23 Filing Description: Initial Listing of Monday Through Friday Weekly Options on Bitcoin Futures and Ether Futures and Tuesday and Thursday Weekly Options on Micro Bitcoin Futures and Micro Ether Futures Contracts

### SPECIFY FILING TYPE

Please note only ONE choice allowed per Submission.

#### Organization Rules and Rule Amendments

- |                          |                                     |            |
|--------------------------|-------------------------------------|------------|
| <input type="checkbox"/> | Certification                       | § 40.6(a)  |
| <input type="checkbox"/> | Approval                            | § 40.5(a)  |
| <input type="checkbox"/> | Notification                        | § 40.6(d)  |
| <input type="checkbox"/> | Advance Notice of SIDCO Rule Change | § 40.10(a) |
| <input type="checkbox"/> | SIDCO Emergency Rule Change         | § 40.10(h) |

#### Rule Numbers:

##### New Product

Please note only ONE product per Submission.

- |                                     |                                       |            |
|-------------------------------------|---------------------------------------|------------|
| <input checked="" type="checkbox"/> | Certification                         | § 40.2(a)  |
| <input type="checkbox"/>            | Certification Security Futures        | § 41.23(a) |
| <input type="checkbox"/>            | Certification Swap Class              | § 40.2(d)  |
| <input type="checkbox"/>            | Approval                              | § 40.3(a)  |
| <input type="checkbox"/>            | Approval Security Futures             | § 41.23(b) |
| <input type="checkbox"/>            | Novel Derivative Product Notification | § 40.12(a) |
| <input type="checkbox"/>            | Swap Submission                       | § 39.5     |

Official Product Name: See filing.

#### Product Terms and Conditions (product related Rules and Rule Amendments)

- |                          |   |                      |
|--------------------------|---|----------------------|
| <input type="checkbox"/> | Certification   | § 40.6(a)            |
| <input type="checkbox"/> | Certification Made Available to Trade Determination     | § 40.6(a)            |
| <input type="checkbox"/> | Certification Security Futures                          | § 41.24(a)           |
| <input type="checkbox"/> | Delisting (No Open Interest)                            | § 40.6(a)            |
| <input type="checkbox"/> | Approval  | § 40.5(a)            |
| <input type="checkbox"/> | Approval Made Available to Trade Determination          | § 40.5(a)            |
| <input type="checkbox"/> | Approval Security Futures                               | § 41.24(c)           |
| <input type="checkbox"/> | Approval Amendments to enumerated agricultural products | § 40.4(a), § 40.5(a) |
| <input type="checkbox"/> | "Non-Material Agricultural Rule Change"                 | § 40.4(b)(5)         |
| <input type="checkbox"/> | Notification  | § 40.6(d)            |

Official Name(s) of Product(s) Affected:

Rule Numbers:

May 4, 2023

**VIA ELECTRONIC PORTAL**

Mr. Christopher J. Kirkpatrick  
Office of the Secretariat  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21st Street, N.W.  
Washington, DC 20581

**Re: CFTC Regulation 40.2(a) Certification. Initial Listing of Monday Through Friday Weekly Options on Bitcoin Futures and Ether Futures and Tuesday and Thursday Weekly Options on Micro Bitcoin Futures and Micro Ether Futures Contracts. CME Submission No. 23-068 (3 of 14)**

Dear Mr. Kirkpatrick:

Chicago Mercantile Exchange Inc. (“CME” or “Exchange”) is certifying to the Commodity Futures Trading Commission (“CFTC” or “Commission”) the initial listing of Monday through Friday Weekly Options on Bitcoin Futures, Ether Futures, and Tuesday and Thursday Weekly Options on Micro Bitcoin Futures and Micro Ether Futures (the “Contracts”), for trading on the CME Globex electronic trading platform (“CME Globex”) and for submission for clearing via CME ClearPort effective on Sunday, May 21, 2023, for trade date Monday, May 22, 2023, as set forth below.

Effective March 28, 2022, the Exchange initially listed Monday, Wednesday and Friday Weekly Options on Micro Bitcoin Futures and Micro Ether Futures contracts for trading and clearing (see CME Submission No. [22-072](#) March 8, 2022).

Contract Title	Rulebook Chapter	CME Globex and CME ClearPort Code
Monday Options on Bitcoin Futures - Weeks 1-5	350A	P1A - P5A
Tuesday Options on Bitcoin Futures - Weeks 1-5	350A	P1B - P5B
Wednesday Options on Bitcoin Futures - Weeks 1-5	350A	P1C - P5C
Thursday Options on Bitcoin Futures - Weeks 1-5	350A	P1D- P5D
Friday Options on Bitcoin Futures - Weeks 1-4	350A	P1E - P4E
Monday Options on Ether Futures - Weeks 1-5	349A	Y1A - Y5A
Tuesday Options on Ether Futures - Weeks 1-5	349A	Y1B - Y5B
Wednesday Options on Ether Futures - Weeks 1-5	349A	Y1C - Y5C
Thursday Options on Ether Futures - Weeks 1-5	349A	Y1D - Y5D
Friday Options on Ether Futures - Weeks 1-4	349A	Y1E - Y4E
Tuesday Options on Micro Bitcoin Futures - Weeks 1-5	348A	W1B-W5B
Thursday Options on Micro Bitcoin Futures - Weeks 1-5	348A	W1D-W5D
Tuesday Options on Micro Ether Futures - Weeks 1-5	347A	V1B-V5B
Thursday Options on Micro Ether Futures - Weeks 1-5	347A	V1D-V5D

## Contract Specifications

### Monday through Friday Weekly Options on Bitcoin Futures and Ether Futures Contracts

Contract Title	Weekly Options on Bitcoin Futures	Weekly Options on Ether Futures																								
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<b>Contract Unit / Underlying Futures Contract</b>	1 Bitcoin Futures contract CME Chapter <a href="#">350</a> ; Commodity Code: BTC	1 Ether Futures contract CME Chapter <a href="#">349</a> ; Commodity Code: ETH																								
<b>Index</b>	CME CF Bitcoin Reference Rate (BRR)	CME CF Ether-Dollar Reference Rate (ETHUSD_RR)																								
<b>Minimum Price Fluctuation</b>	<b>Outright and Spreads:</b> 5.00 index points = \$25.00 per contract for premium above 25.00 1.00 index points = \$5.00 per contract for premium below 25.00 <b>Cabinet:</b> 1.00 index points = \$5.00 per contract	<b>Outright and Spreads:</b> 0.50 index points = \$25.00 per contract																								
<b>Price Quotation</b>	U.S. dollars and cents per index point																									
<b>Trading and Clearing Hours</b>	<b>CME Globex Pre-Open:</b> 4:45 p.m. – 5:00 p.m. Central Time (CT) <b>CME Globex:</b> Sunday - Friday 5:00 p.m. – 4:00 p.m. CT with a 60-minute break each day beginning at 4:00 p.m. CT <b>CME ClearPort:</b> Sunday 5:00 p.m. - Friday 5:45 p.m. CT with no reporting Monday – Thursday from 5:45 p.m. – 6:00 p.m. CT																									
<b>Listing Schedule</b>	Monday – Thursday Contracts: 1 weekly expiration. Friday Contract: 4 Friday weekly expirations. If a Friday expiration coincides with a Monthly expiration, no Friday option contract will be listed.																									
<b>Initial Listing</b>	Monday Weekly Options: Monday June Week 1 (June 3) Tuesday Weekly Options: Tuesday May Week 4 (May 23) & Tuesday May Week 5 (May 30) Wednesday Weekly Options: Wednesday May Week 3 (May 24) Thursday Weekly Options: Thursday May Week 3 (May 25) Friday Weekly Options: Friday June Week 1 (June 2), Friday June Week 2 (June 9), Friday June Week 3 (June 16), Friday June Week 4 (June 23)																									
<b>Termination of Trading</b>	Trading terminates at 4:00 p.m. London time on the named day of the Contract week. Where the named day of the Contract week is not a business day in both the U.K and the U.S., no contract will be listed.																									
<b>Final Settlement Increment</b>	1.00 index points = \$5.00 per contract	0.50 index points = \$25.00 per contract																								
<b>Exercise Procedure</b>	European Style (with no contrary instructions)																									
<b>Strike Price Listing Schedule</b>	Prelisted strikes at \$100,000, \$50,000, \$10,000, \$5,000 and \$1,000 bitcoin increment. Strikes listed for 300% above the at-the-money strike and 100% below the at-the-money strike at: • \$100,000 bitcoin increment for underlying	Prelisted strikes at \$10,000, \$5,000, \$1,000, \$500, and \$100 ether increment. Strikes listed for 300% above the at-the-money strike and 100% below the at-the-money strike at: • \$10,000 ether strike increment for underlying																								

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<b>Settlement at Expiration</b>	Expiring options will exercise into the nearest underlying futures contract.	
<b>Exchange Rulebook</b>	CME 350A	CME 349A
<b>Block Trade Minimum Threshold</b>	10 contracts Reportable window: 15 minutes	100 contracts Reportable window: 15 minutes
<b>CME Globex Matching Algorithm</b>	F: First In, First Out (FIFO)	

## Tuesday and Thursday Weekly Options on Micro Bitcoin Futures and Micro Ether Futures Contracts

Contract Title	Weekly Options on Micro Bitcoin Futures	Weekly Options on Micro Ether Futures												
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<b>Settlement at Expiration</b>	Expiring options will exercise into the nearest underlying futures contract.	
<b>Exchange Rulebook</b>	CME 348A	CME 347A
<b>Block Trade Minimum Threshold</b>	10 contracts Reportable window: 15 minutes	100 contracts Reportable window: 15 minutes
<b>CME Globex Matching Algorithm</b>	F: First In, First Out (FIFO)	

Exhibit A below provides amendments to CME Rulebook chapters 350A, 349A, 348A and 347A in connection with listing the Contracts. Effective concurrently with this submission, the Exchange is implementing additional clarification and other minor amendments to these rulebook chapters. Please see CME Submission No. [23-201](#) also dated May 4, 2023.

## Compliance with Core Principles

The Exchange reviewed the designated contract market core principles (“DCM Core Principles”) as set forth in the Commodity Exchange Act (“CEA” or the “Act”) and identified that the following DCM Core Principles may be impacted as follows:

### **Core Principle 2 – Compliance with Rules**

Trading in the Contracts shall be subject to CME Rulebook Chapter 4, which includes prohibitions against fraudulent, noncompetitive, unfair, and abusive practices. Additionally, trading in the Contracts shall be subject to the Exchange’s trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the Rulebook. Trading activity in the Contracts shall be subject to monitoring and surveillance by CME Group’s Market Regulation Department, which has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.

### **Core Principle 3 – Contracts Not Readily Subject to Manipulation**

The Exchange certifies that the underlying settlement rate for Weekly Options on Bitcoin and Ether Futures Contracts are not readily subject to manipulation. In the case of an option that settles delivering the underlying futures contract, which in turn cash settles, the “underlying market” is the futures market price

series that determines the options settlement (i.e., trading activity in the futures contract settlement period). The Exchange has satisfied itself that the volume of the transactions and/or number of participants in the cash settlement is sufficiently high. The Exchange generally considers average daily volumes, average volume executed during the settlement period, and the number of participants active during the periods. The greater the participation and volume, the more difficult it would be to manipulate the settlement. The volume of transactions and number of participants in the settlement periods gives us comfort that the settlement periods are sufficiently active to support weekly Option Contracts.

#### ***Core Principle 4 – Prevention of Market Disruption***

Trading in the Contracts will be subject to CME Rulebook Chapters 4 and 7, which include prohibitions on manipulation, price distortion, and disruption to the expiration and assignment process. As with any new product listed for trading on a CME Group designated contract market, trading activity in the Contracts will be subject to monitoring and surveillance by CME Group's Market Regulation Department.

#### ***Core Principle 5 – Position Limits or Accountability***

Positions for Options on the Bitcoin Futures Contract will be aggregated with the Exchange's Bitcoin Futures contract (Commodity Code: BTC), Bitcoin Euro Futures contract (Commodity Code BTE), Micro Bitcoin Futures contract (Commodity Code: MBT) and options thereon at the applicable ratio given the differing notional values. Uniform position limits will be applied to the contract. The spot month position limits will be aggregated with Bitcoin Futures (BTC) and set at 4,000 BTC contracts, reducing to 2,000 BTC contracts at the close of business three (3) business days (T-3) prior to expiration. A position accountability level of 5,000 BTC contracts shall be applied to positions in single months outside the spot month and in all months combined

Positions for Options on the Ether Futures Contract will be aggregated with the Exchange's Ether Futures contract (Commodity Code: ETH), Ether Euro Futures contract (Commodity Code ETE), Micro Ether Futures contract (Commodity Code: MET) and options thereon at the applicable ratio given the differing notional values. Uniform position limits will be applied to the contract. The spot month position limits will be aggregated with Ether Futures (ETH) and set at 8,000 ETH contracts effective on the first trading day of the expiring contract month. A position accountability level of 20,000 ETH contracts shall be applied to positions in single months outside the spot month and in all months combined.

The reportable level shall be 1 Options on the Bitcoin Futures or Ether Futures contract. The position limits for the Contracts are consistent with the Commission's guidance.

#### ***Core Principle 7 – Availability of General Information***

The Exchange shall disseminate a Special Executive Report ("SER") that sets forth information in regard to specifications, terms, and conditions of the Contracts. The SER will also be published on the Exchange's website.

#### ***Core Principle 8 – Daily Publication of Trading Information***

The Exchange shall publish trading volumes, open interest levels, and price information daily of the Contracts on the CME Group website and through quote vendors.

#### ***Core Principle 9 – Execution of Transactions***

The Contracts will be listed for trading on the CME Globex electronic trading and for clearing through CME ClearPort. The CME Globex electronic trading venue provides for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.

#### ***Core Principle 10 – Trade Information***

All requisite trade information shall be included in the audit trail and will suffice for the Market Regulation Department to monitor for market abuse.

### ***Core Principle 11 – Financial Integrity of Transactions***

The Contracts shall be cleared by CME Clearing, which is registered with the Commission as a derivative clearing organization, and which is subject to all CFTC regulations related thereto.

### ***Core Principle 12 – Protection of Markets and Market Participants***

Chapters 4 and 5 in the CME Rulebook set forth multiple strictures that preclude intermediaries from disadvantaging their customers. These Rules apply to trading in the Exchange's competitive trading venues and will apply to transactions in the Contract.

### ***Core Principle 13 – Disciplinary Procedures***

Chapter 4 of the CME Rulebook provide for the Exchange to discipline, suspend, or expel members or market participants who violate the rules of the Exchange. Trading in the Contracts shall be subject to these provisions. The Exchange's Market Regulation Department has the authority to exercise its powers of enforcement, in the event that rule violations in the Contracts are identified.

### ***Core Principle 14 – Dispute Resolution***

Disputes in respect of the Contracts shall be subject to the arbitration provisions set forth in Chapter 6 of both the CME Rulebook, which allow all nonmembers to submit to arbitration claims for financial loss resulting from transactions on the Exchange. Pursuant to these provisions, any member named as a respondent in any such claim submitted by a nonmember is required to participate in arbitration proceedings. Additionally, the Exchange requires members to resolve via arbitration all disputes concerning transactions on the Exchange.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.2(a), the Exchange certifies that listing the Contracts complies with the Act including all regulations thereunder. There were no substantive opposing views to this proposal.

The Exchange certifies that this submission has been concurrently posted on the Exchange's website at <http://www.cmegroup.com/market-regulation/rule-filings.html>.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or via e-mail at [CMEGSubmissionInquiry@cmegroup.com](mailto:CMEGSubmissionInquiry@cmegroup.com).

Sincerely,

/s/ Christopher Bowen  
Managing Director and Chief Regulatory Counsel

Attachments:	Exhibit A	CME Rulebook Chapters 350A, 348A, 347A, and 349A (blackline format)
	Exhibit B	Exchange Fees
	Exhibit C:	Strike Price Listing and Exercise Procedures Table
	Exhibit D	Position Limit, Position Accountability, and Reportable Level Table in Chapter 5 of the CME Rulebook (attached under separate cover)
	Exhibit E	CME Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table
	Exhibit F	CME Rule 589. – Special Price Fluctuation Limits and Daily Price Limits Table
	Exhibit G	Market Overview and Analysis of Deliverable Supply



**Exhibit A**  
**CME Rulebook**  
(additions underscored; deletions ~~struck through~~)

**Chapter 350A**  
**Options on Bitcoin Futures**

**350A00. SCOPE OF CHAPTER**

This chapter is limited in application to ~~e~~Options on Bitcoin Futures (“futures”). In addition to the rules of this chapter, [transactions in eOptions on Bitcoin Futures](#) shall be subject to the general rules and regulations of the Exchange, ~~as applicable.~~

~~Unless otherwise specified, times referenced herein shall refer to and indicate Chicago time.~~

**350A01. OPTIONS CHARACTERISTICS**

**350A01.A. ~~Contract Months, Trading Hours, and Trading Halts~~ Listing and Trading Schedule**

~~Options shall be listed for expiration on such dates and shall be scheduled for trading during such hours as may be determined by the Exchange, provided that (The number of contracts open for trading at a given time, and the hours of trading for options contracts shall be determined by the Exchange. There shall be no trading in options when trading is halted in the underlying Futures Contract Month for Bitcoin Futures (Chapter 350).~~

**350A01.B. Trading Unit**

The trading unit shall be an option to buy in the case of a call, or to sell in the case of a put, one Bitcoin Futures contract (Chapter 350). ~~Such Bitcoin Futures contract shall represent 5 bitcoin as valued by the CME CF Bitcoin Reference Rate (“BRR”) in accordance with Rule 35001.~~

**350A01.C. Minimum ~~Fluctuations~~ Price Increments**

**1. Outright**

~~Option prices shall be quoted in USD per bitcoin (BRR Index points), each BRR Index point representing \$1.00 per bitcoin or \$5.00 per Bitcoin Futures contract.~~

~~The minimum price fluctuation shall be \$5.00 per bitcoin (equal to \$25.00 per option contract), provided that trades at a premium equal to or less than \$25.00 per bitcoin (\$125.00 per option contract) may occur at price levels that are integer multiples of \$1.00 per bitcoin (equal to \$5.00 per option contract). Option prices shall be quoted in CME CF Bitcoin Reference Rate (“BRR”) Index points (USD per bitcoin).~~

~~The minimum price fluctuation shall be 5 Index points (equal to \$25.00 per option contract), provided that trades at a premium equal to or less than 25 Index points (equal to \$125.00 per option contract) shall be in increments of 1 Index point (equal to \$5.00 per option contract).~~

**2. Option Spreads and Combinations**

Any option contract that trades as a component of a spread or combination shall be traded at a price that conforms to the applicable minimum price fluctuation as set forth in this Rule, provided that for any option spread or combination that trades at a net premium of \$25.00 Index points (equal to \$125.00 per option contract spread) or ~~fewer~~less, each option contract comprised within such spread or combination may trade in price increments of \$1.00 Index point per bitcoin (equal to \$5.00 per option contract).

**350A01.D. Daily Price Limits**

~~At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.~~

**350A01.E. Position Limits, Exemptions, Position Accountability and Reportable Levels**

~~The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.~~

~~A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.~~

~~Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.~~

**350A01.~~DF~~. Underlying Futures Contract**

## 1. Monthly Options

~~For any Monthly option, t~~The Underlying Futures Contract shall be [the nearest to expire Futures Contract](#) for delivery on the last Friday of the same month as such option's named month of expiration, subject to Rule 35003.A.

## 2. Weekly Options

~~The Underlying Futures Contract shall be the nearest to expire Futures contract for delivery on the same day as such option's named day of expiration.~~

### 350A01.EG. Exercise Prices

#### 1. ~~4.~~ Regularly Listed Exercise Prices

~~On any Business Day, and subject to Rule 350A01.A., t~~The Exchange shall ensure that ~~Monthly~~ put and call options are listed for trading at all eligible exercise prices ~~as~~ set forth in the [Strike Price Listing and Exercise Procedures Table](#).

~~2.~~

~~3.~~

~~4.~~

#### ~~5.2.2.~~ Dynamically Listed Exercise Prices

Upon demand and at the discretion of the Exchange, an option with an out-of-current-range exercise price may be listed for trading as a User-Defined Instrument, on an as-soon-as-possible basis, provided that the exercise price of such option shall be an integer multiple of 25 Index points. ~~The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.~~

### ~~350A01.F. Position Limits, Exemptions, Position Accountability and Reportable Levels~~

~~The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.~~

~~A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.~~

~~Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.~~

### ~~350A01.G. Nature of Options~~

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 350A01.D.) at such option's exercise price (Rule 350A01.E.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

### ~~Monthly Options~~

~~A Monthly option (Rule 350A01.D.1.) will be exercised only at its expiration.~~

### ~~350A01.H. Daily Price Limits~~

~~At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.~~

### 350A01.IH. Termination of Trading

#### 1. Monthly Options

Trading ~~in any of a~~ Monthly option shall terminate on the same date and at the same time as the termination of trading in such option's Underlying Futures Contract (Rule 350A01.D.1.).

If that day is not a business day in both the U.K and the U.S., trading shall terminate on the preceding day that is a business day in either the U.K or the U.S.

#### 2. Weekly Options

~~Trading of a Weekly option shall terminate on its expiration date at 4:00:00 p.m. London time.~~

~~Where the named day of the Contract week is not a business day in both the U.K and the U.S., no contract will be listed.~~

### ~~350A01.J. [Reserved]~~

## 350A02. EXERCISE AND ASSIGNMENT

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of options.

### **350A02.A. Exercise**

#### **Monthly Options**

~~Any Monthly option (Rule 350A01.D.1.) may be exercised only at, and not before, the expiration of such option. Following termination of trading in expiring options, any such option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

~~An expiring call option shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 35003.A) is at or above such option's exercise price, and shall be out of the money if the corresponding Final Settlement Price is strictly below such option's exercise price.~~

~~An expiring put option shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 35003.A) is strictly below such option's exercise price, and shall be out of the money if the corresponding Final Settlement Price is at or above such option's exercise price.~~

~~Options may not be exercised prior to their termination of trading. They may be exercised only at, and not before, its expiration. Following the termination of trading any option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

#### **1. Monthly Options**

~~An expiring Monthly call option (Rule 350A01.F.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 35003.A.) is at or above such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is strictly below such option's exercise price.~~

~~An expiring Monthly put option (Rule 350A01.F.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 35003.A.) is strictly below such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is at or above such option's exercise price.~~

#### **2. Weekly Options**

~~For Options other than Monthly Options, whether an option expires in the money or out of the money shall be determined by the Exchange, in its sole discretion, by reference to the Fixing Price of such option, as follows:~~

~~Such Fixing Price shall be based on the notionally-adjusted volume-weighted average price of transactions in Bitcoin Futures and Micro Bitcoin Futures on the CME Globex electronic trading platform during the last thirty (30) minutes of trading on expiration day (3:30:00 p.m. – 3:59:59 p.m. London time).~~

~~In the event such Fixing Price calculation cannot be determined pursuant to the above calculation, the Exchange, in its sole discretion, shall set such Fixing Price by alternative means.~~

~~An expiring Weekly call option (Rule 350A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is at or above such option's exercise price, and shall be out of the money if the corresponding Fixing Price is strictly below such option's exercise price.~~

~~An expiring Weekly put option (Rule 350A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is strictly below such option's exercise price, and shall be out of the money if the corresponding Fixing Price is at or above such option's exercise price.~~

### **350A02.B. Assignment**

#### **Monthly Options**

~~For a given option contract, an exercise by the Clearing House in accordance with Rules 350A02.A. shall be assigned by the Clearing House to clearing members carrying open short positions in such option contract.~~

~~The clearing member representing the short holder of such option shall be assigned a short position in such option's Underlying Futures Contract (Rule 350A01.D.) if such option is a call, or a long position in such option's Underlying Futures Contract if such option is a put.~~

~~The clearing member representing the long holder of such option shall be assigned a long position in such option's Underlying Futures Contract if such option is a call, or a short position in such option's Underlying Futures Contract if such option is a put.~~

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option~~

shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 350A01.F.) at such option's exercise price (Rule 350A01.G.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.

All such futures positions shall be assigned at a price equal to the exercise price of such option ~~contract,~~ and contract and shall be marked to market (in accordance with Rule 814) on the Business Day on which the Clearing House automatically exercises such.

(End Chapter 350A)

## Chapter 349A Options on Ether Futures

### 349A00. SCOPE OF CHAPTER

This chapter is limited in application to ~~e~~Options on Ether Futures (“futures”). In addition to [the rules of this chapter, transactions in e](#)Options on [Ether](#) Futures shall be subject to the general rules and regulations of the Exchange, ~~as applicable.~~

~~Unless otherwise specified, times referenced herein shall refer to and indicate Chicago time.~~

### 349A01. OPTIONS CHARACTERISTICS

#### 349A01.A. ~~Contract Months, Trading Hours, and Trading Halts~~ Listing and Trading Schedule

~~Options shall be listed for expiration on such dates and shall be scheduled for trading during such hours as may be determined by the Exchange, provided that~~ [The number of contracts open for trading at a given time, and the hours of trading for options contracts shall be determined by the Exchange.](#) There shall be no trading in options when trading is halted in the underlying Futures Contract Month for Ether Futures (Chapter 349).

#### 349A01.B. Trading Unit

The trading unit shall be an option to buy in the case of a call, or to sell in the case of a put, one Ether Futures contract (Chapter 349). ~~Such Ether Futures contract shall represent 50 ether as valued by the CME CF Ether Dollar Reference Rate (“ETHUSD\_RR”) in accordance with Rule 34901.~~

#### 349A01.C. Minimum ~~Fluctuations~~ Price Increments

##### 1. ~~Outright~~

~~Option prices shall be quoted in USD per ether (ETHUSD\_RR Index points), each Index point representing \$0.50 per ether \$25.00 per Ether Futures contract. Option prices shall be quoted in CME CF Ether-Dollar Reference Rate (“ETHUSD\_RR”) Index points (USD per ether).~~

~~The minimum price fluctuation shall be 0.50 Index points, equal to \$25.00 per option contract.~~

##### ~~1-2.~~ Option Spreads and Combinations

Any option contract that trades as a component of a spread or combination shall be traded at a price that conforms to the applicable minimum price fluctuation as set forth in this Rule. The minimum price fluctuation shall be 0.50 Index points, ~~(equal to \$25.00 per option contract).~~

#### 349A01.D. Daily Price Limits

~~At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.~~

#### 349A01.E. Position Limits, Exemptions, Position Accountability and Reportable Levels

~~The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.~~

~~A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.~~

~~Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.~~

#### 349A01.~~DE~~. Underlying Futures Contract

##### 1. Monthly Options

~~For any Monthly option,~~ [The Underlying Futures Contract shall be the nearest to expire Futures Contract for delivery on the last Friday of the same month as such option’s named month of expiration, subject to Rule 34903.A.](#)

##### 2. Weekly Options

[The Underlying Futures Contract shall be the nearest to expire Futures contract for delivery on the same day as such option’s named day of expiration.](#)

#### 349A01.~~EG~~. Exercise Prices

##### 1. Regularly Listed Exercise Prices

~~On any Business Day, and subject to Rule 349A01.A., t~~The Exchange shall ensure that ~~Monthly~~ put and call options are listed for trading at all eligible exercise prices ~~as~~ set forth in the ~~Strike Price Listing and Exercise Procedures Table~~.

## ~~2. Dynamically Listed Exercise Prices~~

~~Upon demand and at the discretion of the Exchange, an option with an out-of-current-range exercise price may be listed for trading as a User-Defined Instrument, on an as-soon-as-possible basis, provided that the exercise price of such option shall be an integer multiple of 25 Index points. The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.~~

### ~~349A01.F. Position Limits, Exemptions, Position Accountability and Reportable Levels~~

~~The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.~~

~~A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.~~

~~Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.~~

### ~~349A01.G. Nature of Options~~

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 349A01.D.) at such option's exercise price (Rule 349A01.E.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

#### ~~Monthly Options~~

~~A Monthly option (Rule 349A01.D.) will be exercised only at its expiration.~~

### ~~349A01.H. Daily Price Limits~~

~~At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.~~

### ~~349A01.IH. Termination of Trading~~

#### ~~1. Monthly Options~~

~~Trading in any of a Monthly option shall terminate on the same date and at the same time as the termination of trading in such option's Underlying Futures Contract (Rule 349A01.D.1).~~

~~If that day is not a business day in both the U.K and the U.S., trading shall terminate on the preceding day that is a business day in either the U.K or the U.S.~~

#### ~~2. Weekly Options~~

~~Trading of a Weekly option shall terminate on its expiration date at 4:00:00 p.m. London time.~~

~~Where the named day of the Contract week is not a business day in both the U.K and the U.S., no contract will be listed.~~

### ~~349A01.J. [Reserved]~~

## **349A02. EXERCISE AND ASSIGNMENT**

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of options.

### **349A02.A. Exercise**

#### ~~Monthly Options~~

~~Any Monthly option (Rule 349A01.D.) may be exercised only at, and not before, the expiration of such option. Following termination of trading in expiring options, any such option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

~~An expiring call option shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34903.A) is at or above such option's exercise price, and shall be out of the money if the corresponding Final Settlement Price is strictly below such option's exercise price.~~

~~An expiring put option shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34903.A) is strictly below such option's exercise price, and shall be out of the money if the corresponding Final Settlement Price is at or above such option's exercise price. Options may not be exercised prior to their termination of trading. They may be exercised only at, and not before, its expiration. Following the termination of trading any option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

### **1. Monthly Options**

~~An expiring Monthly call option (Rule 349A01.F.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34903.A.) is at or above such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is strictly below such option's exercise price.~~

~~An expiring Monthly put option (Rule 349A01.F.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34903.A.) is strictly below such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is at or above such option's exercise price.~~

### **2. Weekly Options**

~~For Options other than Monthly Options, whether an option expires in the money or out of the money shall be determined by the Exchange, in its sole discretion, by reference to the Fixing Price of such option, as follows:~~

~~Such Fixing Price shall be based on the notionally-adjusted volume-weighted average price of transactions in Ether Futures and Micro Ether Futures on the CME Globex electronic trading platform during the last thirty (30) minutes of trading on expiration day (3:30:00 p.m. – 3:59:59 p.m. London time).~~

~~In the event such Fixing Price calculation cannot be determined pursuant to the above calculation, the Exchange, in its sole discretion, shall set such Fixing Price by alternative means.~~

~~An expiring Weekly call option (Rule 349A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is at or above such option's exercise price, and shall be out of the money if the corresponding Fixing Price is strictly below such option's exercise price.~~

~~An expiring Weekly put option (Rule 349A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is strictly below such option's exercise price, and shall be out of the money if the corresponding Fixing Price is at or above such option's exercise price.~~

### **349A02.B. Assignment**

#### **Monthly Options**

~~For a given option contract, an exercise by the Clearing House in accordance with Rules 349A02.A. shall be assigned by the Clearing House to clearing members carrying open short positions in such option contract.~~

~~The clearing member representing the short holder of such option shall be assigned a short position in such option's Underlying Futures Contract (Rule 349A01.D.) if such option is a call, or a long position in such option's Underlying Futures Contract if such option is a put.~~

~~The clearing member representing the long holder of such option shall be assigned a long position in such option's Underlying Futures Contract if such option is a call, or a short position in such option's Underlying Futures Contract if such option is a put.~~

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 349A01.F.) at such option's exercise price (Rule 349A01.G.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

~~All such futures positions shall be assigned at a price equal to the exercise price of such option ~~contract,~~ ~~and~~ ~~contract~~ and shall be marked to market (in accordance with Rule 814) on the Business Day on which the Clearing House automatically exercises such.~~

(End Chapter 349A)

## Chapter 348A Options on Micro Bitcoin Futures

### 348A00. SCOPE OF CHAPTER

This chapter is limited in application to ~~e~~Options on Micro Bitcoin Futures (“futures”). In addition to [the rules of this chapter](#), [transactions in eOptions on Micro Bitcoin Futures](#) shall be subject to the general rules and regulations of the Exchange, ~~as applicable.~~

~~Unless otherwise specified, times referenced herein shall refer to and indicate Chicago time.~~

### 348A01. OPTIONS CHARACTERISTICS

#### 348A01.A. ~~Contract Months, Trading Hours, and Trading Halts~~ [Listing and Trading Schedule](#)

~~Options shall be listed for expiration on such dates and shall be scheduled for trading during such hours as may be determined by the Exchange, provided that~~ [The number of contracts open for trading at a given time, and the hours of trading for options contracts shall be determined by the Exchange.](#) There shall be no trading in options when trading is halted in the underlying Futures Contract Month for Micro Bitcoin Futures (Chapter 348).

#### 348A01.B. Trading Unit

The trading unit shall be an option to buy in the case of a call, or to sell in the case of a put, one Micro Bitcoin Futures contract (Chapter 348). ~~Such Micro Bitcoin Futures contract shall represent one tenth (1/10) bitcoin as valued by the CME CF Bitcoin Reference Rate (“BRR”) in accordance with Rule 34801.~~

#### 348A01.C. Minimum ~~Fluctuations~~ [Price Increments](#)

##### 1. Outright

~~Option prices shall be quoted in BRR Index points (USD per bitcoin).~~

[Option prices shall be quoted in CME CF Bitcoin Reference Rate \(“BRR”\) Index points \(USD per bitcoin\).](#)

The minimum price fluctuation shall be 5 Index points (equal to \$0.50 per option contract), provided that trades at a premium equal to or less than 25 Index points (equal to \$2.50 per option contract) ~~may shall be in increments occur at price levels that are integer multiples~~ of 1 Index point (equal to \$0.10 per option contract).

##### 2. Option Spreads and Combinations

Any option contract that trades as a component of a spread or combination shall be traded at a price that conforms to the applicable minimum price fluctuation as set forth in this Rule, provided that for any option spread or combination that trades at a net premium of 25 Index points (equal to \$2.50 per option contract spread) or less than, each option contract comprised within such spread or combination may trade in price increments of 1 Index point (equal to \$0.10 per option contract).

#### 348A01.D. [Daily Price Limits](#)

[At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.](#)

#### 348A01.E. [Position Limits, Exemptions, Position Accountability and Reportable Levels](#)

[The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.](#)

[A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.](#)

[Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.](#)

#### 348A01.~~DF~~. Underlying Futures Contract

##### 1. Monthly Options

~~For any Monthly option,~~ [The Underlying Futures Contract shall be the nearest to expire Futures Contract for delivery on the last Friday of the same month as such option’s named month of expiration, subject to Rule 34803.A.](#)

##### ~~2. Weekly Monday Options~~

~~For any Weekly Monday option, the Underlying Futures Contract shall be the next expiring Futures~~



Contract after such option's expiration, subject to Rule 34803.A.

### ~~3. Weekly Wednesday Options~~

~~For any Weekly Wednesday option, the Underlying Futures Contract shall be the next expiring Futures Contract after such option's expiration, subject to Rule 34803.A.~~

### ~~4. Weekly Friday Options~~

~~For any Weekly Friday option, the Underlying Futures Contract shall be the next expiring Futures Contract after such option's expiration, subject to Rule 34803.A.~~

## 2. Weekly Options

The Underlying Futures Contract shall be the nearest to expire Futures contract for delivery on the same day as such option's named day of expiration.

### **348A01.EG. Exercise Prices**

#### **1. ~~4. Regularly Listed Exercise Prices~~**

~~On any Business Day, and subject to Rule 348A01.A.,~~ the Exchange shall ensure that Monthly, Weekly put and call options are listed for trading at all eligible exercise prices as set forth in the Strike Price Listing and Exercise Procedures Table.

#### ~~2. Dynamically Listed Exercise Prices~~

~~Upon demand and at the discretion of the Exchange, an option with an out-of-current-range exercise price may be listed for trading as a User Defined Instrument, on an as-soon-as-possible basis, provided that the exercise price of such option shall be an integer multiple of 25 Index points (\$25 per bitcoin). The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.~~

### ~~348A01.F. Position Limits, Exemptions, Position Accountability and Reportable Levels~~

~~The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.~~

~~A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.~~

~~Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.~~

### ~~348A01.G. Nature of Options~~

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 348A01.D.) at such option's exercise price (Rule 348A01.E.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

~~Any Monthly, Weekly Monday, Weekly Wednesday or Weekly Friday option will be exercised only at its expiration.~~

### ~~348A01.H. Daily Price Limits~~

~~At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.~~

### ~~348A01.IH. Termination of Trading~~

~~Any Monthly option (Rule 348A01.D.1.), Weekly Monday option (Rule 348A01.D.2.), Weekly Wednesday option (Rule 348A01.D.3.) or Weekly Friday option (Rule 348A01.D.4.) may be exercised only at, and not before, the expiration of such option. Following termination of trading in expiring options, any such option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

#### **1. Monthly Options**

Trading ~~of a in any~~ Monthly option shall terminate on the same date and at the same time as the termination of trading in such option's Underlying Futures Contract (Rule 348A01.D.1.).

If that day is not a business day in both the U.K and the U.S., trading shall terminate on the preceding day that is a business day in either the U.K or the U.S.

## **2. Weekly Monday, Weekly Wednesday and Weekly Friday Options**

~~Trading in any Weekly Monday, Weekly Wednesday and Weekly Friday option shall terminate on its expiration date at 4:00:00 p.m. London time.~~

~~If such Monday is not a scheduled Business Day in both the US and the UK, then trading in expiring options shall be scheduled to terminate on the Business Day, in either the US or the UK, that next following such Monday.~~

~~If such Wednesday is not a scheduled Business Day in both the US and the UK, then trading in expiring options shall be scheduled to terminate on the Business Day, in either the US or the UK, that first precedes such Wednesday.~~

~~If such Friday is not a scheduled Business Day in both the US and the UK~~

~~, then trading in expiring options shall be scheduled to terminate on the Business Day, in either the US or the UK, that first precedes such Friday.~~

~~If the market in the Underlying Futures Contract for any such Weekly Monday, Weekly Wednesday or Weekly Friday option does not open on the day scheduled for termination of option trading and for option expiration, then trading in such option shall terminate, and such option shall expire, on the next day on which the market in such Underlying Futures Contract is open for trading.~~

~~Trading of a Weekly option shall terminate on its expiration date at 4:00:00 p.m. London time.~~

~~Where the named day of the Contract week is not a business day in both the U.K and the U.S., no contract will be listed.~~

### **348A01.J. [Reserved]**

## **348A02. EXERCISE AND ASSIGNMENT**

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of options.

~~Options which are in the money on the last day of trading are automatically exercised.~~

### **348A02.A. Exercise**

~~Any Monthly option (Rule 348A01.D.1.), Weekly Monday option (Rule 348A01.D.2.), Weekly Wednesday option (Rule 348A01.D.3.) or Weekly Friday option (Rule 348A01.D.4.) may be exercised only at, and not before, the expiration of such option. Following termination of trading in expiring options, any such option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised. Options may not be exercised prior to their termination of trading. They may be exercised only at, and not before, its expiration. Following the termination of trading any option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

#### **1. Monthly Options**

An expiring Monthly call option (Rule 348A01.D.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34803.A.) is at or above such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is strictly below such option's exercise price.

An expiring Monthly put option (Rule 348A01.D.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34803.A.) is strictly below such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is at or above such option's exercise price.

#### **2. Weekly Monday, Weekly Wednesday and Weekly Friday Options**

~~Whether an option expires in the money or out of the money shall be determined by the Exchange, in its sole discretion, by reference to the Fixing Price of such option, as follows:~~

~~Such Fixing Price shall be based on the notionally-adjusted volume-weighted average price of transactions in Bitcoin futures and Micro Bitcoin futures on the CME Globex electronic trading platform during the last thirty (30) minutes of trading on expiration day (3:30:00 p.m. — 3:59:59 p.m. London time)~~

~~In the event such Fixing Price calculation cannot be determined pursuant to the above calculation, the Exchange, in its sole discretion, shall set such Fixing Price by alternative means.~~

~~An expiring Weekly Monday call option (Rule 348A01.D.2.), Weekly Wednesday call option (Rule 348A01.D.3.) or Weekly Friday call option (Rule 348A01.D.4.) shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract (Rule 34803.A.) is at or above such option's exercise~~

~~price, and shall be out of the money if the corresponding Fixing Price is strictly below such option's exercise price.~~

~~An expiring Weekly Monday put option (Rule 348A01.D.2.), Weekly Wednesday put option (Rule 348A01.D.3.) or Weekly Friday put option (Rule 348A01.D.4.) shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract (Rule 34803.A.) is strictly below such option's exercise price, and shall be out of the money if the corresponding Fixing Price is at or above such option's exercise price. For Options other than Monthly Options, whether an option expires in the money or out of the money shall be determined by the Exchange, in its sole discretion, by reference to the Fixing Price of such option, as follows:~~

~~Such Fixing Price shall be based on the notionally-adjusted volume-weighted average price of transactions in Bitcoin Futures and Micro Bitcoin Futures on the CME Globex electronic trading platform during the last thirty (30) minutes of trading on expiration day (3:30:00 p.m. – 3:59:59 p.m. London time).~~

~~In the event such Fixing Price calculation cannot be determined pursuant to the above calculation, the Exchange, in its sole discretion, shall set such Fixing Price by alternative means.~~

~~An expiring Weekly call option (Rule 348A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is at or above such option's exercise price, and shall be out of the money if the corresponding Fixing Price is strictly below such option's exercise price.~~

~~An expiring Weekly put option (Rule 348A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is strictly below such option's exercise price, and shall be out of the money if the corresponding Fixing Price is at or above such option's exercise price.~~

#### **348A02.B. Assignment**

~~For a given option contract, an exercise by the Clearing House in accordance with Rules 348A02.A. shall be assigned by the Clearing House to clearing members carrying open short positions in such option contract.~~

~~The clearing member representing the short holder of such option shall be assigned a short position in such option's Underlying Futures Contract (Rule 348A01.D.) if such option is a call, or a long position in such option's Underlying Futures Contract if such option is a put.~~

~~The clearing member representing the long holder of such option shall be assigned a long position in such option's Underlying Futures Contract if such option is a call, or a short position in such option's Underlying Futures Contract if such option is a put.~~

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 348A01.F.) at such option's exercise price (Rule 348A01.G.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

~~All such futures positions shall be assigned at a price equal to the exercise price of such option ~~contract,~~ ~~and~~ ~~contract~~ and shall be marked to market (in accordance with Rule 814) on the Business Day on which the Clearing House automatically exercises such.~~

(End Chapter 348A)

## Chapter 347A Options on Micro Ether Futures

### 347A00. SCOPE OF CHAPTER

This chapter is limited in application to ~~e~~Options on Micro Ether Futures (“futures”). In addition to [the rules of this chapter](#), [transactions in eOptions on Micro Ether Futures](#) shall be subject to the general rules and regulations of the Exchange, ~~as applicable.~~

~~Unless otherwise specified, times referenced herein shall refer to and indicate Chicago time.~~

### 347A01. OPTIONS CHARACTERISTICS

#### 347A01.A. ~~Contract Months, Trading Hours, and Trading Halts~~ [Listing and Trading Schedule](#)

~~Options shall be listed for expiration on such dates and shall be scheduled for trading during such hours as may be determined by the Exchange, provided that~~ [The number of contracts open for trading at a given time, and the hours of trading for options contracts shall be determined by the Exchange.](#) There shall be no trading in options when trading is halted in the underlying Futures Contract Month for Micro Ether Futures (Chapter 347).

#### 347A01.B. Trading Unit

The trading unit shall be an option to buy in the case of a call, or to sell in the case of a put, one Micro Ether Futures contract (Chapter 347). ~~Such Micro Ether Futures contract shall represent one tenth (1/10) ether as valued by the CME CF Ether Dollar Reference Rate (“ETHUSD\_RR”) in accordance with Rule 34704.~~

#### 347A01.C. Minimum ~~Fluctuations~~ [Price Increments](#)

##### 1. Outright

~~Option prices shall be quoted in ETHUSD\_RR Index points (USD per ether).~~ [Option prices shall be quoted in CME CF Ether-Dollar Reference Rate \(“ETHUSD\\_RR”\) Index points \(USD per ether\).](#)

The minimum price fluctuation shall be 0.50 Index Points, ~~(equal to \$0.05 per option contract).~~

##### 2. Option Spreads and Combinations

Any option contract that trades as a component of a spread or combination shall be traded at a price that conforms to the applicable minimum price fluctuation as set forth in this Rule. The minimum price fluctuation shall be 0.50 Index Points, ~~(equal to \$0.05 per option contract).~~

#### 347A01.D. Daily Price Limits

[At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.](#)

#### 347A01.E. Position Limits, Exemptions, Position Accountability and Reportable Levels

[The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.](#)

[A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.](#)

[Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.](#)

#### 347A01.~~DE~~. Underlying Futures Contract

##### 1. Monthly Options

~~For any Monthly option,~~ [The Underlying Futures Contract shall be the nearest to expire Futures Contract for delivery on the last Friday of the same month as such option’s named month of expiration, subject to Rule 34703.A.](#)

##### ~~2. Weekly Monday Options~~

~~For any Weekly Monday option, the Underlying Futures Contract shall be the next expiring Futures Contract after such option’s expiration, subject to Rule 34703.A.~~

##### ~~3. Weekly Wednesday Options~~

~~For any Weekly Wednesday option, the Underlying Futures Contract shall be the next expiring Futures Contract after such option’s expiration, subject to Rule 34703.A.~~

#### ~~4.—Weekly Friday Options~~

~~For any Weekly Friday option, the Underlying Futures Contract shall be the next expiring Futures Contract after such option's expiration, subject to Rule 34703.A.~~

#### 2. Weekly Options

The Underlying Futures Contract shall be the nearest to expire Futures contract for delivery on the same day as such option's named day of expiration.

#### **347A01.EG. Exercise Prices**

##### **1. Regularly Listed Exercise Prices**

On any Business Day, and subject to Rule 347A01.A., the Exchange shall ensure that Monthly, Weekly put and call options are listed for trading at all eligible exercise prices as set forth in the [Strike Price Listing and Exercise Procedures Table](#).

##### ~~2. Dynamically Listed Exercise Prices~~

~~Upon demand and at the discretion of the Exchange, an option with an out-of-current range exercise price may be listed for trading as a User Defined Instrument, on an as-soon-as-possible basis, provided that the exercise price of such option shall be an integer multiple of 25 Index points (\$25 per ether). The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.~~

#### **347A01.F. Position Limits, Exemptions, Position Accountability and Reportable Levels**

~~The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.~~

~~A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.~~

~~Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.~~

#### **347A01.G. Nature of Options**

~~Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 347A01.D.) at such option's exercise price (Rule 347A01.E.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

~~Any Monthly, Weekly Monday, Weekly Wednesday or Weekly Friday option will be exercised only at its expiration.~~

#### **347A01.H. Daily Price Limits**

~~At the commencement of each trading day, the contract shall be subject to special price fluctuation limits and daily price limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.~~

#### **347A01.IH. Termination of Trading**

##### **1. Monthly Options**

Trading in any Monthly option shall terminate on the same date and at the same time as the termination of trading in such option's Underlying Futures Contract (Rule 347A01.D.1.).

If that day is not a business day in both the U.K and the U.S., trading shall terminate on the preceding day that is a business day in either the U.K or the U.S.

##### **2.—Weekly Monday, Weekly Wednesday and Weekly Friday Options**

~~Trading in any Weekly Monday, Weekly Wednesday and Weekly Friday option shall terminate on its expiration date at 4:00:00 p.m. London time.~~

~~If such Monday is not a scheduled Business Day in both the US and the UK, then trading in expiring options shall be scheduled to terminate on the Business Day, in either the US or the UK, that next following such Monday.~~

~~If such Wednesday is not a scheduled Business Day in both the US and the UK, then trading in expiring options shall be scheduled to terminate on the Business Day, in either the US or the UK, that first precedes such Wednesday.~~

~~If such Friday is not a scheduled Business Day in both the US and the UK, then trading in expiring options~~

~~shall be scheduled to terminate on the Business Day, in either the US or the UK, that first precedes such Friday.~~

~~If the market in the Underlying Futures Contract for any such Weekly Monday, Weekly Wednesday or Weekly Friday option does not open on the day scheduled for termination of option trading and for option expiration, then trading in such option shall terminate, and such option shall expire, on the next day on which the market in such Underlying Futures Contract is open for trading.~~

## 2. Weekly Options

Trading of a Weekly option shall terminate on its expiration date at 4:00:00 p.m. London time.

Where the named day of the Contract week is not a business day in both the U.K ~~London~~ and the U.S., no contract will be listed.~~347A01.J. [Reserved]~~

## **347A02. EXERCISE AND ASSIGNMENT**

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of options.

~~Options which are in the money on the last day of trading are automatically exercised.~~

### **347A02.A. Exercise**

~~Any Monthly option (Rule 347A01.D.1.), Weekly Monday option (Rule 347A01.D.2.), Weekly Wednesday option (Rule 347A01.D.3.) or Weekly Friday option (Rule 347A01.D.4.) may be exercised only at, and not before, the expiration of such option. Following termination of trading in expiring options, any such option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised. Options may not be exercised prior to their termination of trading. They may be exercised only at, and not before, its expiration. Following the termination of trading any option that is in the money shall be automatically exercised by the Clearing House, and any such option that is out of the money shall be abandoned by the Clearing House. For the avoidance of doubt, no such option that expires in the money may be abandoned, and no such option that expires out of the money may be exercised.~~

#### **1. Monthly Options**

An expiring Monthly call option (Rule 347A01.D.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34703.A.) is at or above such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is strictly below such option's exercise price.

An expiring Monthly put option (Rule 347A01.D.1.) shall be in the money if the corresponding Final Settlement Price for the Underlying Futures Contract (Rule 34703.A.) is strictly below such option's exercise price and shall be out of the money if the corresponding Final Settlement Price is at or above such option's exercise price.

#### **2. Weekly Monday, Weekly Wednesday and Weekly Friday Options**

~~Whether an option expires in the money or out of the money shall be determined by the Exchange, in its sole discretion, by reference to the Fixing Price of such option, as follows:~~

~~Such Fixing Price shall be based on the notionally-adjusted volume-weighted average price of transactions in Ether futures and Micro Ether futures on the CME Globex electronic trading platform during the last thirty (30) minutes of trading on expiration day (3:30:00 p.m. — 3:59:59 p.m. London time)~~

~~In the event such Fixing Price calculation cannot be determined pursuant to the above calculation, the Exchange, in its sole discretion, shall set such Fixing Price by alternative means.~~

~~An expiring Weekly Monday call option (Rule 347A01.D.2.), Weekly Wednesday call option (Rule 347A01.D.3) or Weekly Friday call option (Rule 347A01.D.4.) shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract (Rule 34703.A.) is at or above such option's exercise price, and shall be out of the money if the corresponding Fixing Price is strictly below such option's exercise price.~~

~~An expiring Weekly Monday put option (Rule 347A01.D.2.), Weekly Wednesday put option (Rule 347A01.D.3.) or Weekly Friday put option (Rule 347A01.D.4.) shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract (Rule 34703.A.) is strictly below such option's exercise price, and shall be out of the money if the corresponding Fixing Price is at or above such option's exercise price. For Options other than Monthly Options, whether an option expires in the money or out of the money shall be determined by the Exchange, in its sole discretion, by reference to the Fixing Price of such option, as follows:~~

~~Such Fixing Price shall be based on the notionally-adjusted volume-weighted average price of~~

transactions in Ether Futures and Micro Ether Futures on the CME Globex electronic trading platform during the last thirty (30) minutes of trading on expiration day (3:30:00 p.m. – 3:59:59 p.m. London time). In the event such Fixing Price calculation cannot be determined pursuant to the above calculation, the Exchange, in its sole discretion, shall set such Fixing Price by alternative means.

An expiring Weekly call option (Rule 347A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is at or above such option's exercise price, and shall be out of the money if the corresponding Fixing Price is strictly below such option's exercise price.

An expiring Weekly put option (Rule 347A01.F.2.), shall be in the money if the corresponding Fixing Price for the Underlying Futures Contract is strictly below such option's exercise price, and shall be out of the money if the corresponding Fixing Price is at or above such option's exercise price.

#### **347A02.B. Assignment**

~~For a given option contract, an exercise by the Clearing House in accordance with Rules 347A02.A. shall be assigned by the Clearing House to clearing members carrying open short positions in such option contract.~~

~~The clearing member representing the short holder of such option shall be assigned a short position in such option's Underlying Futures Contract (Rule 347A01.D.) if such option is a call, or a long position in such option's Underlying Futures Contract if such option is a put.~~

~~The clearing member representing the long holder of such option shall be assigned a long position in such option's Underlying Futures Contract if such option is a call, or a short position in such option's Underlying Futures Contract if such option is a put. Upon exercise of a put option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a long position in one Underlying Futures Contract (Rule 347A01.F.) at such option's exercise price (Rule 347A01.G.). Upon exercise of a call option on behalf of the long holder of such option, the short holder of such option shall incur the obligation to assume a short position in one Underlying Futures Contract at such option's exercise price.~~

All such futures positions shall be assigned at a price equal to the exercise price of such option contract, and shall be marked to market (in accordance with Rule 814) on the Business Day on which the Clearing House automatically exercises such.

(End Chapter 347A)

**Exhibit B  
Exchange Fees**

<b>Membership Type</b>	<b>Venue/Transaction Type</b>	<b>Bitcoin</b>	<b>Ether</b>	<b>Micro Bitcoin</b>	<b>Micro Ether</b>
Individual Members Clearing Members Rule 106.J Equity Member Firms & Rule 106.J Qualified Subsidiaries Rule 106.I Members & Rule 106.I Qualified Affiliates Rule 106.S Member Approved Funds	CME Globex	\$2.50	\$2.00	\$1.25	\$0.10
	EFP	\$3.75	\$3.67	\$2.00	\$0.16
	EFR	\$3.75	\$3.67	\$2.00	\$0.16
	Block	\$3.75	\$3.67	\$2.00	\$0.16
	Delivery	\$1.25	\$0.75	\$0.65	\$0.05
	Exe Asn Future From	\$1.30	\$0.80	\$0.70	\$0.05
Rule 106.D Lessees Rule 106.F Employees	CME Globex	\$4.00	\$2.90	\$2.00	\$0.16
	EFP	\$6.00	\$4.41	\$3.20	\$0.26
	EFR	\$6.00	\$4.41	\$3.20	\$0.26
	Block	\$6.00	\$4.41	\$3.20	\$0.26
	Delivery	\$2.00	\$1.20	\$1.00	\$0.08
	Exe Asn Future From	\$2.05	\$1.25	\$1.05	\$0.08
Rule 106.R Electronic Corporate Members (For other than CME Globex - Non-Member rates apply)	CME Globex	\$4.10	\$2.96	\$2.05	\$0.17
Rule 106.H and 106.N Firms	CME Globex	\$4.40	\$3.14	\$2.20	\$0.18
	EFP	\$6.40	\$4.63	\$3.55	\$0.29
	EFR	\$6.40	\$4.63	\$3.55	\$0.29
	Block	\$6.40	\$4.63	\$3.55	\$0.29
	Delivery	\$2.20	\$1.32	\$1.10	\$0.09
	Exe Asn Future From	\$2.25	\$1.37	\$1.15	\$0.09
International Incentive Program (IIP) Participants International Volume Incentive Program (IVIP) Participants (For other than CME Globex - Non-Member rates apply)	CME Globex	\$5.00	\$4.00	\$2.50	\$0.20
Central Bank Incentive Program (CBIP) Participants Latin American Fund Manager Incentive Program (FMIP) Participants (For other than CME Globex - Non-Member rates apply)	CME Globex	\$4.85	\$4.00	\$2.50	\$0.20
Members Trading Outside of Division (For other than CME Globex During ETH - Non-Member rates apply)	CME Globex During ETH Only	\$4.75	\$3.85	\$2.40	\$0.18
Non-Members	CME Globex	\$5.00	\$4.00	\$2.50	\$0.20
	EFP	\$7.50	\$7.33	\$4.00	\$0.32
	EFR	\$7.50	\$7.33	\$4.00	\$0.32
	Block	\$7.50	\$7.33	\$4.00	\$0.32
	Delivery	\$2.50	\$1.50	\$1.25	\$0.10
	Exe Asn Future From	\$2.55	\$1.55	\$1.30	\$0.10



<b>Processing Fees</b>	<b>Fee</b>
Position Adjustment/Position Transfer	\$0.10
Give-Up Surcharge	\$0.05
Facilitation Fee	\$0.40

**Exhibit C**  
**Strike Price Listing and Exercise Procedures Table**

Product Name	Weekly Options on Bitcoin Futures	Weekly Options on Micro Bitcoin Futures	Weekly Options on Ether Futures	Weekly Options on Micro Ether Futures
<b>Product Group</b>	Cryptocurrencies			
<b>Product Subgroup</b>	Bitcoin		Ether	
<b>Exchange</b>	CME			
<b>Rulebook Chapter</b>	350A	348A	349A	347A
<b>Option Style</b>	European			
<b>Contrary Instructions</b>	No			
<b>Exact at the Money Characteristics</b>	Exercise calls – Abandon puts			
<b>Underlying Commodity Code</b>	BTC	MBT	ETH	MET
<b>Underlying Product Name</b>	Bitcoin Futures	Micro Bitcoin Futures	Ether Futures	Micro Ether Futures
<b>Strike Price Listing Rule</b>	<p>Prelisted strikes at \$100,000, \$50,000, \$10,000, \$5,000 and \$1,000 bitcoin increment.</p> <p>Strikes listed for 300% above the at-the-money strike and 100% below the at-the-money strike at:</p> <ul style="list-style-type: none"> <li>• \$100,000 bitcoin increment for underlying settlement above \$500,000</li> <li>• \$50,000 bitcoin increment for underlying settlement at or below \$500,000</li> <li>• \$10,000 bitcoin increment for underlying settlement at or below \$100,000</li> <li>• \$5,000 bitcoin increment for underlying settlement at or below \$50,000</li> <li>• \$1,000 bitcoin increment for underlying settlement at or below \$10,000</li> <li>• \$500 bitcoin increment for underlying settlement at or below \$5,000</li> </ul> <p>When less than 210 days remain until expiration (DTE), additional strikes listed for 75% above the at-the-money strike and 25% below the at-the-money strike at:</p> <ul style="list-style-type: none"> <li>• \$10,000 bitcoin increment for underlying settlement above \$500,000</li> <li>• \$5,000 bitcoin increment for underlying settlement at or below \$500,000</li> <li>• \$1,000 bitcoin increment for underlying settlement at or below \$100,000</li> <li>• \$100 bitcoin increment for underlying settlement at or below \$10,000</li> <li>• \$50 bitcoin increment for underlying settlement at or below \$5,000</li> </ul> <p>When less than 5 days remain until expiration (DTE), additional strikes listed for 15% above the at-the-money strike and 5% below the at-the-money strike at:</p> <ul style="list-style-type: none"> <li>• \$5,000 bitcoin increment for underlying settlement above \$500,000</li> <li>• \$2,500 bitcoin increment for underlying settlement at or below \$500,000</li> <li>• \$500 bitcoin increment for underlying settlement at or below \$100,000</li> <li>• \$250 bitcoin increment for underlying settlement at or below \$50,000</li> <li>• \$50 bitcoin increment for underlying settlement at or below \$10,000</li> </ul>		<p>Prelisted strikes at \$10,000, \$5,000, \$1,000, \$500, and \$100 ether increment.</p> <p>Strikes listed for 300% above the at-the-money strike and 100% below the at-the-money strike at:</p> <ul style="list-style-type: none"> <li>• \$10,000 ether strike increment for underlying settlement above \$50,000</li> <li>• \$5,000 ether strike increment for underlying settlement at or below \$50,000</li> <li>• \$1,000 ether strike increment for underlying settlement at or below \$10,000</li> <li>• \$500 ether strike increment for underlying settlement at or below \$5,000</li> <li>• \$100 ether strike increment for underlying settlement at or below \$1,000</li> <li>• \$50 ether strike increment for underlying settlement at or below \$500</li> </ul> <p>When less than 210 days remain until expiration (DTE), additional strikes listed for 75% above the at-the-money strike and 25% below the at-the-money strike at:</p> <ul style="list-style-type: none"> <li>• \$1,000 ether strike increment for underlying settlement above \$50,000</li> <li>• \$500 ether strike increment for underlying settlement at or below \$50,000</li> <li>• \$100 ether strike increment for underlying settlement at or below \$10,000</li> <li>• \$10 ether strike increment for underlying settlement at or below \$1,000</li> <li>• \$5 ether strike increment for underlying settlement at or below \$500</li> </ul> <p>When less than 5 days remain until expiration (DTE), additional strikes listed for 15% above the at-the-money strike and 5% below the at-the-money strike at:</p> <ul style="list-style-type: none"> <li>• \$500 ether strike increment for underlying settlement above \$50,000</li> <li>• \$250 ether strike increment for underlying settlement at or below \$50,000</li> <li>• \$50 ether strike increment for underlying settlement at or below \$10,000</li> <li>• \$25 ether strike increment for underlying settlement at or below \$5,000</li> <li>• \$5 ether strike increment for underlying settlement at or below \$1,000</li> </ul>	

**Exhibit D**  
**CME Rulebook**  
**Chapter 5**  
**(“Trading Qualifications and Practices”)**  
**Position Limit, Position Accountability, and Reportable Level Table**  
(attached under separate cover)

**Exhibit E**  
**CME Rulebook**  
**Chapter 5**  
**(“Trading Qualifications and Practices”)**  
**Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table**  
(additions underscored)

Instrument	Globex Symbol	Globex Non-Reviewable Ranges (NRR)
<a href="#">Monday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">P1A-P5A</a>	The greater of the following: • <u>Delta multiplied by the underlying futures non-reviewable range</u> • <u>20% of premium up to the futures underlying non-reviewable range</u> • <u>5 ticks</u>
<a href="#">Tuesday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">P1B-P5B</a>	
<a href="#">Wednesday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">P1C-P5C</a>	
<a href="#">Thursday Weekly Options on Bitcoin Futures - Week 1-6</a>	<a href="#">P1D-P5D</a>	
<a href="#">Friday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">P1E-P4E</a>	
<a href="#">Monday Weekly Options on Ether Futures - Week 1-5</a>	<a href="#">Y1A-Y5A</a>	
<a href="#">Tuesday Weekly Options on Ether Futures - Week 1-6</a>	<a href="#">Y1B-Y5B</a>	
<a href="#">Wednesday Weekly Options on Ether Futures - Week 1-5</a>	<a href="#">Y1C-Y5C</a>	
<a href="#">Thursday Weekly Options on Ether Futures - Week 1-6</a>	<a href="#">Y1D-Y5D</a>	
<a href="#">Friday Weekly Options on Ether Futures - Week 1-4</a>	<a href="#">Y1E-Y4E</a>	
<a href="#">Tuesday Weekly Options on Micro Bitcoin Futures - Week 1-5</a>	<a href="#">W1B-W5B</a>	
<a href="#">Thursday Weekly Options on Micro Bitcoin Futures - Week 1-5</a>	<a href="#">W1D-W5D</a>	
<a href="#">Tuesday Weekly Options on Micro Ether Futures - Week 1-5</a>	<a href="#">V1B-V5D</a>	
<a href="#">Thursday Weekly Options on Micro Ether Futures - Week 1-5</a>	<a href="#">V1D-V5D</a>	

**Exhibit F**  
**CME Rulebook**  
**Chapter 5**  
**(“Trading Qualifications and Practices”)**  
**Rule 589. – Special Price Fluctuation Limits and Daily Price Limits Table**  
(additions underscored)

Product	Rulebook Chapter	Commodity Code	Primary/Associated	Associated With	Daily Price Limit
<a href="#">Monday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">350A</a>	<a href="#">P1A-P5A</a>	<a href="#">Associated</a>	<a href="#">BTC</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Tuesday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">350A</a>	<a href="#">P1B-P5B</a>	<a href="#">Associated</a>	<a href="#">BTC</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Wednesday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">350A</a>	<a href="#">P1C-P5C</a>	<a href="#">Associated</a>	<a href="#">BTC</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Thursday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">350A</a>	<a href="#">P1D-P5D</a>	<a href="#">Associated</a>	<a href="#">BTC</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Friday Weekly Options on Bitcoin Futures - Week 1-5</a>	<a href="#">350A</a>	<a href="#">P1E-P4E</a>	<a href="#">Associated</a>	<a href="#">BTC</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Monday Weekly Options on Ether Futures - Week 1-5</a>	<a href="#">349A</a>	<a href="#">Y1A-Y5A</a>	<a href="#">Associated</a>	<a href="#">ETH</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Tuesday Weekly Options on Ether Futures - Week 1-5</a>	<a href="#">349A</a>	<a href="#">Y1B-Y5B</a>	<a href="#">Associated</a>	<a href="#">ETH</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Wednesday Weekly Options on Ether Futures - Week 1-5</a>	<a href="#">349A</a>	<a href="#">Y1C-Y5C</a>	<a href="#">Associated</a>	<a href="#">ETH</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Thursday Weekly Options on Ether Futures - Week 1-5</a>	<a href="#">349A</a>	<a href="#">Y1D-Y5D</a>	<a href="#">Associated</a>	<a href="#">ETH</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Friday Weekly Options on Ether Futures - Week 1-4</a>	<a href="#">349A</a>	<a href="#">Y1E-Y4E</a>	<a href="#">Associated</a>	<a href="#">ETH</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Tuesday Weekly Options on Micro Bitcoin Futures - Week 1-5</a>	<a href="#">348A</a>	<a href="#">W1B-W5B</a>	<a href="#">Associated</a>	<a href="#">MBT</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Thursday Weekly Options on Micro Bitcoin Futures - Week 1-5</a>	<a href="#">348A</a>	<a href="#">W1D-W5D</a>	<a href="#">Associated</a>	<a href="#">MBT</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Tuesday Weekly Options on Micro Ether Futures - Week 1-5</a>	<a href="#">347A</a>	<a href="#">V1B-V5B</a>	<a href="#">Associated</a>	<a href="#">MET</a>	<a href="#">Daily Price Limit Table</a>
<a href="#">Thursday Weekly Options on Micro Ether Futures - Week 1-5</a>	<a href="#">347A</a>	<a href="#">V1D-V5D</a>	<a href="#">Associated</a>	<a href="#">MET</a>	<a href="#">Daily Price Limit Table</a>

## Exhibit G Cash Market Overview and Deliverable Supply Analysis

### Bitcoin Cash Market Overview

Bitcoin was created by Satoshi Nakamoto, a pseudonymous person or team who outlined the technology in a 2008 white paper. The bitcoin network went live in 2009. Every transaction involving bitcoin is tracked on the bitcoin blockchain ledger which is public and permissionless. Unlike a bank's ledger, the bitcoin blockchain is distributed across the entire network. No company, country, or third party is in control of it; and anyone can become part of that network.

The network's native cryptocurrency token is bitcoin. According to [Coinmarketcap.com](https://coinmarketcap.com), the market cap for all digital assets is over \$1.2 TN as of 31 March 2023. Bitcoin is the largest cryptocurrency by market capitalization, is estimated to be \$550 BN as of 31 March 2023. The 24-hour trading volume in bitcoin is currently \$19 BN. Bitcoin is actively traded across approximately 400 spot exchanges and other execution platforms that offer leveraged exposure Bitcoin is traded against many other crypto pairs (e.g., Ether) and in a number of fiat currency pairs. The dominant fiat currency pair is the USD.

**Figure 1: Bitcoin Market Capitalization**



Source: CoinMarketCap.com

**Figure 2: Bitcoin Price History**

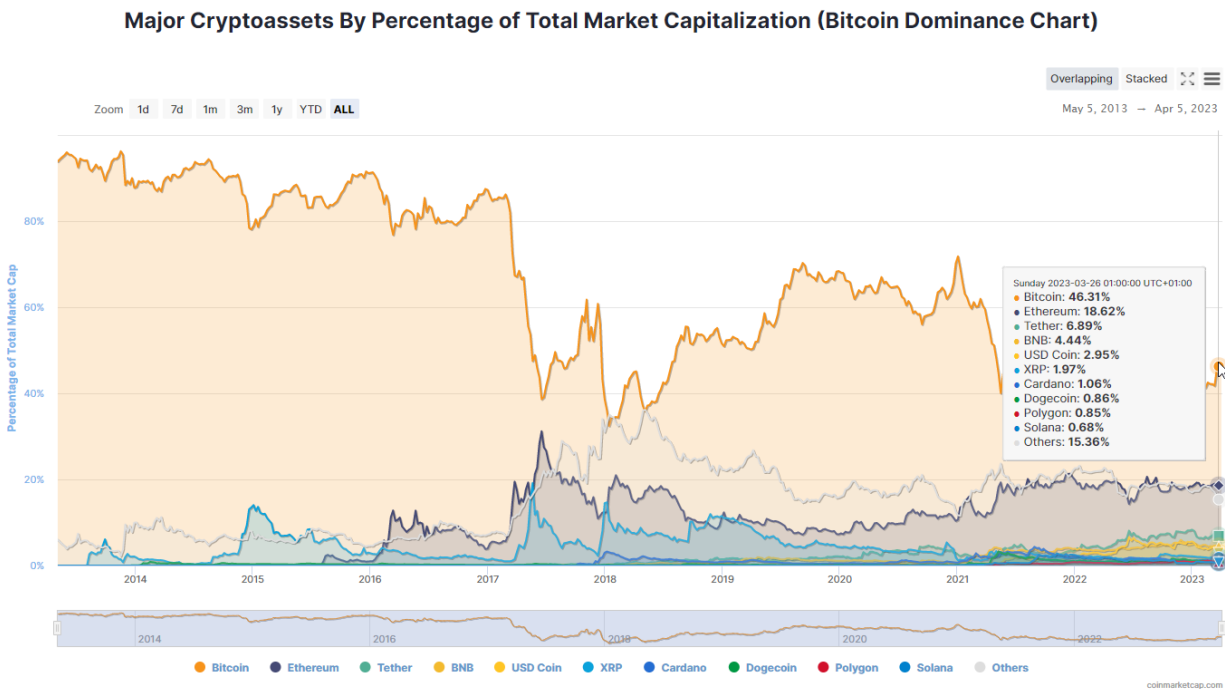


Source: CoinMarketCap.com

The value of a single bitcoin has steadily climbed to an all-time high of \$68,789.63 on November 10, 2021. The current price on March 31, 2023, is \$28,500.

In terms of market dominance, bitcoin is consistently the dominant cryptocurrency, as demonstrated in Figure 3. As of March 26, 2023, bitcoin’s dominance stood at 46.31%.

**Figure 3: Bitcoin’s Percentage of Total Market Capitalization (Dominance)**



Source: CoinMarketCap.com

## Bitcoin Deliverable Supply Analysis

### Bitcoin Mining and Blocks

The bitcoin protocol defines, in advance, how the currency will be created and at what rate. Upon release of bitcoin in 2009, Satoshi Nakamoto coded the creation of 21 million bitcoin. The supply of new bitcoins is designed to grow toward a ceiling of 21 million units. However, not all 21 million coins are currently in circulation.

Bitcoin mining is the process by which new bitcoin enter circulation. Miners are individuals or groups who work to secure the network by verifying transactions and adding them to a public ledger; the bitcoin blockchain, in what is called blocks. A block contains details of all the transactions that have been transacted within a given timeframe. Blocks form a chain by referring to the hash (or fingerprint) of the previous block

Mining requires specialist equipment and great power. The miners are an important part of preserving the blockchain ledgers. The miner that first finds the newest block is rewarded with new bitcoin for their work. Miners also take transaction fees paid by parties sending bitcoin.

The bitcoin code is designed to create a new block every ten minutes. As such the number of bitcoins in existence increases about every 10 minutes when new blocks are mined and added to the bitcoin blockchain.

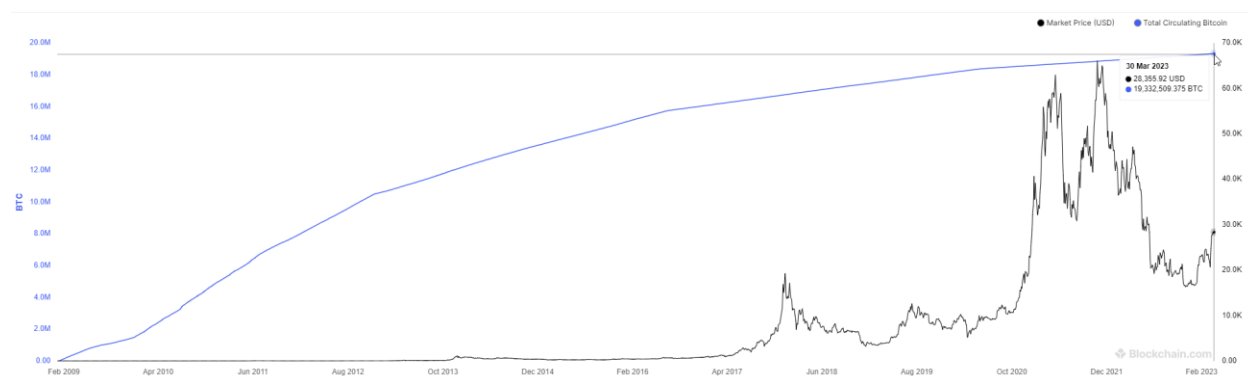
The bitcoin protocol defines how many bitcoins are released each time a miner discovers a new block. At the current mining rate each new block adds 6.25 bitcoins into circulation, which is approximately 900 bitcoins per day.

Initially, the block reward was set to 50 bitcoins per solved block. The protocol states that the number of bitcoins created per block, i.e., the mining reward, will decrease geometrically. This system is in place to systematically reduce the rate at which new bitcoins are issued into circulation This gradual systematic process will see a 50% reduction every 210,000 blocks, or approximately every four (4) years, until all the 21 million units of bitcoin have been created, which will occur in 2140.

### Bitcoin in Circulation

As of March 30, 2023, 19,332,509 million bitcoin are in circulation. This represents circa 92% of all the bitcoin supply originally set.

**Figure 4: Total Circulating Supply**



Source: [www.blockchain.com/en/charts/total-bitcoins](http://www.blockchain.com/en/charts/total-bitcoins)

As designed, the percent growth of bitcoin in circulation has slowed since inception. The growth of the bitcoin in circulation is expected to slow with time, eventually ending at 21 million bitcoins.

The theoretical circulating supply of bitcoin, however, is not the total spendable supply. The total spendable supply is lower than the total circulating supply due to accidental loss, willful destruction, and technical peculiarities.

From the total circulating supply of 19.33 million bitcoins, it would be prudent to discount for unrecoverable bitcoins that are burned (bitcoins that will never be spent - for example, if the bitcoin were sent to a public address without any party knowing or having a way to compute the private key, the bitcoin associated with that key are considered "burned."); permanently withdrawn from circulation or lost. There is no consensus on the number to be deducted, but best estimates indicate there to be about a 20% total loss. This would produce an estimate of 15.46 million bitcoin as circulating supply (equal to 19.33 million x 0.80).

Options on both Bitcoin futures and Micro Bitcoin futures contracts will aggregate into the Exchange's standard Bitcoin futures contract for position limit purposes. For the discussion of position limits that follows, the contract size referenced is for the existing Bitcoin Futures contract. The standard contract has a 5 bitcoin multiplier. The Micro Bitcoin contract has a 0.1 bitcoin multiplier.

In theory, all 15.46 million units extant may be considered as notional deliverable supply of contract-grade commodity. A prudent and conservative estimate, however, would acknowledge that bitcoin is traded in multiple currency denominations, of which USD is one.

For illustration, consider that during the six months ending March 31, 2023, approximately 60% of fiat bitcoin transaction volume was in the BTC:USD currency pair per Coinmarketcap.com. Were this used as a proxy for the share of outstanding bitcoin that stands as notional contract-grade supply for Bitcoin futures, it would produce an estimate of 9.28 million bitcoin (equal to 15.46 million x 0.60) as the 'money stock' notionally eligible for delivery in fulfillment of expiring contract months. The following analysis uses this estimate.

By the standards applicable to agricultural or other commodity futures for physical delivery (i.e., 17 CFR 150.5(b)(1)), the position limit would be set at or below 25 percent of estimated spot month deliverable supply. Under current bitcoin market conditions, the resultant maximum position limit would be 2.32 million bitcoin, or 463,920 contracts ((equal to 9.28 million bitcoin x 0.25) / (5 bitcoin per contract)).

An alternative approach is based on the standard that the Exchange has typically applied to foreign exchange futures products, according to which the position limit is set at or below one percent of the money stock in the contract-grade currency denomination. Applied to the estimated bitcoin 'money stock', the result would be a position limit of 92,784 bitcoin, or 18,556 contracts ((equal to (9.28 million bitcoin x 0.01) / (5 bitcoin per contract)) or less.

### **Position Limits**

In its certification of CME Bitcoin Futures contract (Commodity Code: BTC) product rules to the CFTC in September 2021, the Exchange proposed a spot-month position limit of 4,000 BTC contracts, reducing to 2,000 BTC contracts at the close of business three (3) business days (T-3) prior to expiration.

The position limit will be applicable in aggregate to Bitcoin Futures, Micro Bitcoin Futures, Options on Bitcoin Futures, Options on Micro Bitcoin futures and Bitcoin Euro Futures.

Viewed in the context of the preceding cash market overview and to align with the Bitcoin Futures contract, the aggregated Spot Month Position Limit shall be 4,000 BTC contracts effective on the first trading day of the expiring contract month.

The proposed quantity is sufficiently stringent that it would be highly unlikely to motivate attempted manipulation of the benchmark in connection with Contract final settlement and is significantly below the standard 25% 'money stock' analysis of deliverable supply test.

Options on Bitcoin Futures and Micro Bitcoin Futures contract shall share the Accountability Level with the Bitcoin Futures contract. The Single Month Accountability Level and All Month Accountability Level shall be 5,000 BTC contracts. Additionally, to allow for increased transparency and more effective market



surveillance, a reportable position level of one (1) Option on Bitcoin Futures or Micro Bitcoin Futures contract is proposed.

### Ethereum Cash Market Overview

Vitalik Buterin founded Ethereum as a concept in a [White Paper](#) in late 2013. Since then, the development of Ethereum has been managed by a community of developers. A crowd sale to fund development took place in July 2014, and the blockchain went live on 30 July 2015.

Ethereum is a decentralized open source blockchain featuring smart contract functionality. The main Ethereum network is public and permissionless. Anyone can download or write software to connect to the network and start creating transactions and smart contracts without needing permission from any organization.

Ethereum's inbuilt native token is called ether (ETH). It can be traded for other cryptocurrencies or other sovereign currencies, just like bitcoin (BTC). According to [Coinmarketcap.com](https://coinmarketcap.com/) (<https://coinmarketcap.com/>), Ether's market capitalization is estimated to be \$219.5 B as of March 31, 2023. It is the second-largest cryptocurrency by market capitalization, behind bitcoin.

**Figure 5: Ether Market Capitalization**



Source: [coinmarketcap.com](https://coinmarketcap.com)

The 24-hour trading volume in ether is \$9B as of March 31, 2023. Many altcoins are based on the Ethereum network, which brings liquidity into the network's native cryptocurrency. Ether is actively traded across approximately 400 spot exchanges and other execution platforms that offer leveraged exposure. The value of a single ether has steadily climbed to an all-time high of \$4,891.70 on November 16, 2021, the current price on March 31, 2023, is approximately \$1,820.

**Figure 6: Ethers Price History**



Source: coinmarketcap.com

### Total Supply

Ethereum has its own blockchain, which contains blocks of data pertaining to transactions on the Ethereum network. A block contains details of all the transactions and smart contracts that have been transacted within a given timeframe. Blocks form a chain by referring to the hash (or fingerprint) of the previous block. The biggest difference between ether and bitcoin are the rules around token generation. For bitcoin, there will be a maximum supply of 21 million coins. According to the protocol, future ETH generation will be capped at 25% of the pre-mine, per year. This is to say that there is a maximum growth rate of 18 million ether which can be mined per year. There is no upper cap or limit. Theoretically the maximum is infinite.

### Ether token generation

New units of ether are created through mining. Mining is the process of confirming transactions, combining them into blocks and adding them to the blockchain. As a reward, and to keep miners incentivized, every time a block is completed, the miner responsible for creating that block receives a reward in the form of new ether. Miners compete to earn newly issued tokens known as the block reward.

### Ether in Circulation

The total number of ETH in existence can be calculated as:

Pre-mine + Block rewards + Uncle rewards + Uncle referencing rewards + Eth2 staking rewards

#### Pre-mine

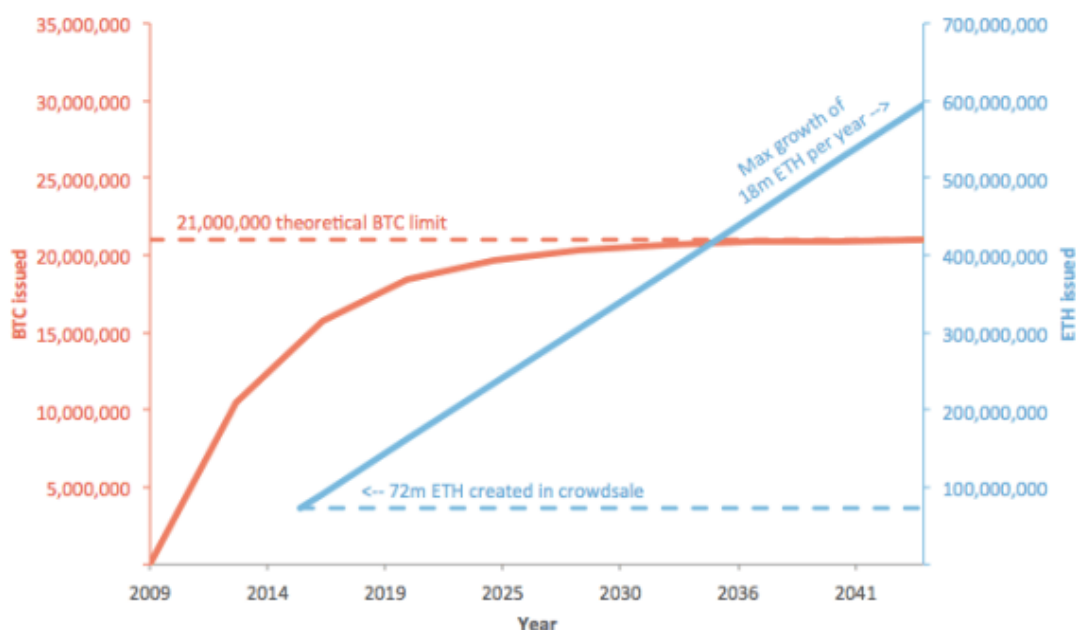
Around 72 million ETH were issued for the genesis block – the first ever block of the Ethereum blockchain. 60 million ETH were allocated to the initial contributors in the 2014 crowd sale that funded the project, and 20% or 12 million ETH were given to the development fund and the Ethereum Foundation.

#### Block reward

In Ethereum the time between blocks is around 14 seconds, compared with bitcoin's ~10 minutes.

The original block reward in 2015 was 5 ETH per block, which later went down to 3 ETH in late 2017. As of 2019, when a block is successfully mined on the Ethereum blockchain, a miner receives 2 ETH as a reward. Over time, as more and more ETH are mined, the constant amount mined becomes a smaller and smaller portion of the total amount of existing ETH. The percentage mined of the total existing amount tends to 0% over time, asymptotically, never actually reaching 0%. Therefore, mining will never tail off. A constant amount of ETH will be mined forever. The chart below shows the bitcoin and ethereum generation models. Additionally, an equilibrium will eventually be reached when the rate of ETH lost due to carelessness, destruction, etc. equals the rate of new ETH mined.

**Figure 7: BTC vs ETH generation model**



Source: <https://bitsonblocks.net/2016/10/02/gentle-introduction-ethereum/>

### Uncle reward

Ethereum's rate of block generation is much higher than that of bitcoin. When more blocks get created more quickly, the rate of "block clashes" increases – i.e., multiple valid blocks can get created at almost the same time, but only one of them can make it into the main chain.

In bitcoin these blocks, that are mined a little late and don't form part of the main blockchain are called 'orphans' and are entirely discarded. However, with ethereum they are called 'uncles' and can be referenced by later blocks. This is called the uncle reward.

### Uncle referencing reward

A miner who references an uncle also gets a fraction of ETH per uncle.

### Gas Reward

The blocks are created or mined by some participants and distributed to other participants who validate them.

When a user sends ether or uses an Ethereum application, a small fee in ETH is charged to use the Ethereum network. In addition to block rewards for mining new ether tokens, the miner also receives a fee as an incentive to process and verify what the user is doing. Miners are like the record-keepers of Ethereum – they check and assure the validity of the transaction and keep the Ethereum network secure and free of centralized control.

In bitcoin, the maximum block size is specified in bytes whereas Ethereum's block size is based on complexity of contracts being run – known as a Gas limit per block, and the maximum can vary slightly from block to block.

### Recent Developments

Ethereum moved to a consensus mechanism called proof-of-stake (PoS) in 2022, this change has been on Ethereum's roadmap, as a plan to move from the electricity-expensive Proof of Work (PoW) mining to a more energy-efficient PoS protocol as part of the Eth2 upgrades.

Eth2 refers to a set of interconnected upgrades that will make Ethereum more scalable, more secure, and more sustainable. These upgrades are being built by multiple teams from across the Ethereum ecosystem.

Proof-of-stake is the underlying mechanism that activates validators upon receipt of enough stake. For

Ethereum, users will need to stake 32 ETH to become a validator. Validators are chosen at random to create blocks and are responsible for checking and confirming blocks they do not create.

Unlike proof-of-work, validators do not need to use significant amounts of computational power because they are selected at random and are not competing.

Validators do not mine blocks; they just need to create blocks when chosen and validate or attest proposed blocks when they are not. Validators get rewards for proposing new blocks and for attesting to ones they've seen.

A user's stake is also used to incentivize good validator behavior. For example, a user can lose a portion of their stake for things like going offline (failing to validate) or their entire stake for deliberate collusion.

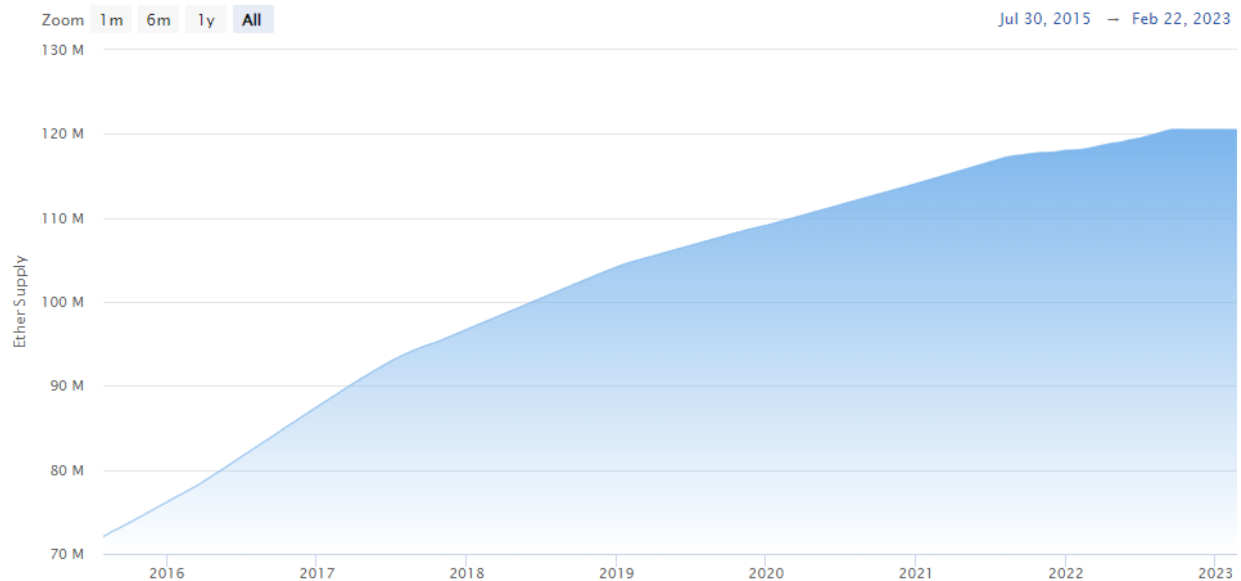
With any changes to Ethereum, such as the transition to PoS, the generation rate is guaranteed to not increase. But it may decrease.

### Ether in Circulation

Currently there are 120.45 million ether in circulation. 72 million of which were issued in the genesis block. The remaining amount has been generated in the form of block rewards to the miners on the Ethereum network.

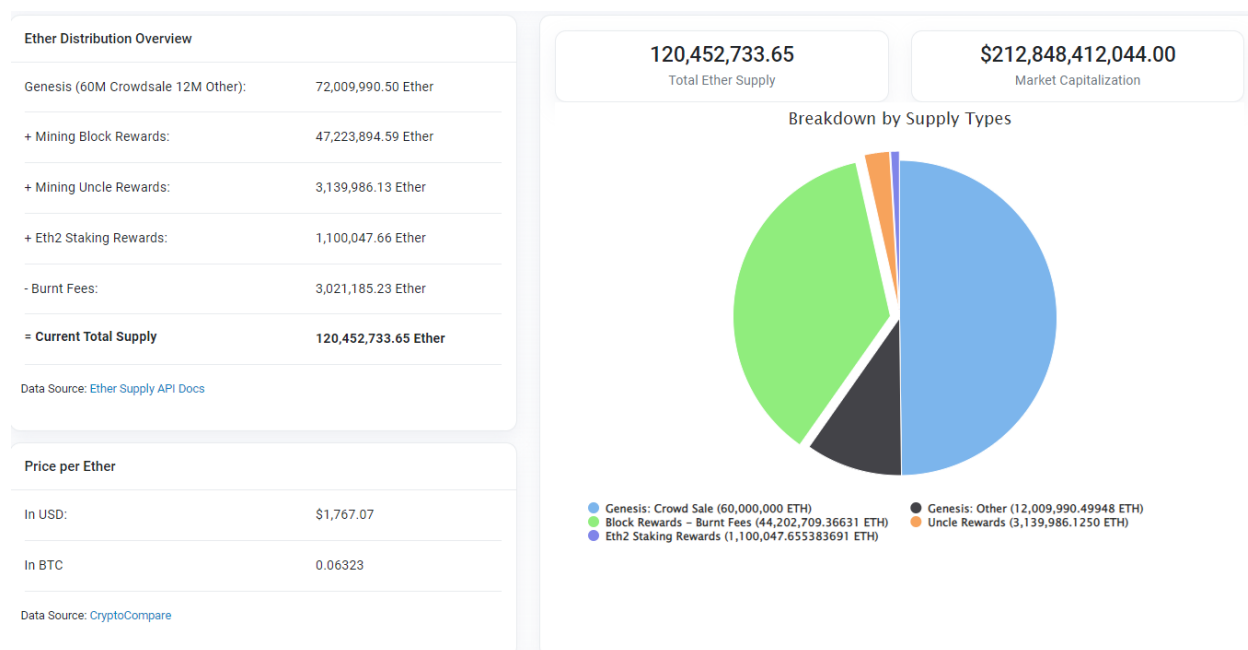
The chart below shows the ether supply growth— a breakdown of daily block reward, uncle inclusion reward, uncle reward and Eth2 staking to arrive at the total daily Ether supply.

**Figure 8: Ether Supply Growth Chart**



Source: etherscan.io

**Figure 9: Ether Supply Distribution**



Source: etherscan.io

The table and pie chart above, shows the distribution of ether from reward of both block and uncle block mining to arrive at the current total ether supply of 120.45 million.

The total circulating supply of ETH is not the total spendable supply. The total spendable supply is lower than the total circulating supply, due to accidental loss, willful destruction, and technical peculiarities.

From the total circulating supply of 120.45 million ether, one must discount for unrecoverable ether that are burned; permanently withdrawn from circulation or lost. There is no consensus on the number to be deducted, but best estimates indicate there to be about a 20% total loss. This would produce an estimate of 96.36 million ether as circulating supply. (equal to 120.45 million x 0.80).

### Ethereum Deliverable Supply Analysis

Options on both Ether futures and Micro Ether futures contracts will aggregate into the Exchange's standard Ether futures contract for position limit purposes. For the discussion of position limits that follows, the contract size referenced is for the existing Ether Futures contract. The standard contract has a 50 ether multiplier. The Micro Ether contract has a 0.1 ether multiplier

In theory, all 96.36 million units extant may be considered as notional deliverable supply of contract-grade commodity. A prudentially conservative estimate, however, would acknowledge that ether is traded in multiple currency denominations, of which USD is one.

For illustration, consider that during the six months ending March 31, 2023, approximately 80% of fiat ether transaction volume was in the ETH:USD currency pair per Coinmarketcap.com. Using 80%, as a conservative USD market share as a proxy for the share of outstanding ether that stands as notional contract-grade supply for Ether Futures, it would produce an estimate of 77.09 million ether (equal to 96.36 million x 0.80) as the 'money stock' notionally eligible for delivery in fulfilment of expiring Contracts. The following analysis uses this estimate.

By the standards applicable to agricultural or other commodity futures for physical delivery (i.e., 17 CFR 150.5(b)(1)), the position limit would be set at or below 25 percent of estimated spot month deliverable supply. Under current ether market conditions, the resultant maximum position limit would be 19.27 million ether, or 385,440 contracts ((equal to 77.09 million ether x 0.25) / (50 ether per contract)).

An alternative based on the standard that the Exchange has typically applied to foreign exchange futures products, according to which the position limit is set at or below one percent of the money stock in the contract-grade currency denomination. Applied to the estimated ether 'money stock', the result would be a position limit of 770,880 ether or 15,417 contracts ((equal to (77.09 million ether x 0.01) / (50 ether per contract)) or less.

### **Position Limits**

In its initial certification of CME Ether Futures contract (Commodity Code: ETH) product rules to the CFTC in February 2021, the Exchange proposed a spot-month position limit of 8,000 ETH contracts.

The position limit will be applicable in aggregate to Ether Futures, Micro Ether Futures, Options on Ether Futures, Options on Micro Ether futures and Ether Euro Futures.

Viewed in the context of the preceding cash market overview and to align with the Ether Futures contract, the aggregated Spot Month Position Limit shall be 8,000 ETH contracts effective on the first trading day of the expiring contract month.

The proposed quantity is sufficiently stringent that it would be highly unlikely to motivate attempted manipulation of the benchmark in connection with Contract final settlement and is significantly below the standard 25% 'money stock' analysis of deliverable supply test.

Options on Ether Futures and Micro Ether Futures contract shall share the Accountability Level with the Ether Futures contract. The Single Month Accountability Level and All Month Accountability Level shall be 20,000 ETH contracts. Additionally, to allow for increased transparency and more effective market surveillance, a reportable position level of one (1) Option on Ether Futures or Micro Ether Futures contract is proposed.