

October 28, 2022

Via CFTC Portal Submissions

Mr. Christopher Kirkpatrick  
Secretary of the Commission  
Office of the Secretariat  
Commodity Futures Trading Commission  
3 Lafayette Centre  
1155 21<sup>st</sup> Street, N.W.  
Washington D.C. 20581

**RE: Self-Certification of Product: Nadex Adds Bitcoin and Ether Cryptocurrency  
“Touch Bracket” Variable Payout Contracts – Submission Pursuant to Commission  
Regulation §40.2(a)**

Dear Mr. Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended (“Act”), and section §40.2(a) of the regulations promulgated by the Commodity Futures Trading Commission (the “Commission”) under the Act (the “Regulations”), North American Derivatives Exchange, Inc. (“Nadex”, the “Exchange”) hereby self-certifies the terms and conditions for two new cryptocurrency products:

- BITCOIN CRYPTOCURRENCY “TOUCH BRACKET” VARIABLE PAYOUT CONTRACTS
- ETHER CRYPTOCURRENCY “TOUCH BRACKET” VARIABLE PAYOUT CONTRACTS

The Commission may recall that Nadex has listed both Binary and Call Spread Contracts based on the Underlying bitcoin market at various times since 2014.<sup>1</sup> As the public interest in cryptocurrency continues to grow, Nadex continues to expand its product offering to meet public demand. Nadex has decided to focus its’ digital currency offering on the two most popular crypto

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<sup>1</sup> Unless otherwise defined herein, capitalized terms shall have the same definition as set forth in Rule 1.1 of the Nadex Rulebook.

coins – bitcoin and Ether – and to structure the contracts as “Touch Bracket Contracts” (which are further described below).

The new Bitcoin and Ether Cryptocurrency “Touch Bracket” Variable Payout Contracts (the “Crypto Contracts”) will be cash-settled and will operate in the same fashion as Nadex’s currently listed Touch Bracket Contracts (also known as “knock-out”). Touch Bracket Contracts are not only quite popular in markets with high volatility, such as cryptocurrency, but due to their unique structure inherently minimize the possibility of contract manipulation.

A Touch Bracket Contract is a type of Variable Payout Contract and is similar to a Call Spread in that it contains a pre-determined Ceiling and Floor price level. However, unlike a Call Spread Contract, if the Underlying market, as reflected in the corresponding Indicative Index, for a Touch Bracket Contract equals or moves through (i.e., “touches”) either the Ceiling or Floor level of a Touch Bracket at any time prior to the listed Expiration time, the Touch Bracket Contract will immediately expire. In the event the Underlying market does not touch the Ceiling or Floor prior to its listed Expiration time, the Touch Bracket will expire at the listed Expiration time, which will occur on the last trading day of the week. Accordingly, Nadex categorizes its Touch Bracket Contracts as “weekly” Contracts. The notional value of one Bitcoin Touch Bracket Contract or one Ether Touch Bracket Contract will be \$500. The Expiration Value of the Crypto Contracts will be the Indicative Index value calculated by Nadex at the time that Indicative Index Value either equals or is greater than the Contract’s Ceiling, is equal to or less than the Contract’s Floor, or at the listed Expiration if the Contract is not knocked-out early. Because a Touch Bracket Contract will always expire concurrent with the Indicative Index Value that will be used to determine the settlement of the Contract, it is impossible for the final Expiration Value to be published prior to the expiration of the Nadex Contract. No trading in the listed Contract will occur following expiration of the Contract. Moreover, the Indicative Index Value is calculated using Underlying prices leading up to the Contract’s expiration. Therefore, no trading in the Underlying markets following expiration of the Nadex Contracts will impact the final settlement of the Nadex Contracts. Finally, consistent with all other Contracts currently traded on Nadex, the Crypto Contracts will be fully collateralized.

The Indicative Index for both the Bitcoin and Ether Crypto Contracts will be determined by using Nadex’s standard Indicative Index calculation method (the “Nadex Calculation Method”).<sup>2</sup> Nadex will calculate and produce a Bitcoin Index Value and an Ether Index Value once each second throughout the life of the Crypto Contracts. That is, each second Nadex will calculate a Bitcoin and Ether Index Value by taking all trade prices in the relevant Underlying bitcoin or Ether markets, as reported in the ICE<sup>®</sup> Crypto Data further described below, in the ten (10) seconds leading up to the Calculation Time, provided at least twenty-five (25) trade prices are captured during the ten (10) second period, removing the highest twenty (20) percent of

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<sup>2</sup> All Touch Bracket Contracts listed and cleared by Nadex make use of the Indicative Index to determine the Expiration Value of the contract. Specifically, these include the EUR/USD, GBP/USD, USD/CHF, USD/JPY, AUD/USD, USD/CAD, EUR/GBP, AUD/JPY, GBP/JPY, EUR/JPY, Wall Street 30, US 500, US Tech 100, US SmallCap 2000, Gold, Silver, Crude Oil, and Natural Gas Touch Bracket Contracts.

Underlying prices and the lowest twenty (20) percent of Underlying trade prices from the data set<sup>3</sup>, and using the remaining Underlying trade prices to calculate the relevant Bitcoin or Ether Index Value for that second. The calculation used is a simple average of the remaining Underlying trade prices in the data set, rounded to one decimal point past the precision of the Underlying market. In the event the time it takes to collect at least twenty-five (25) Underlying trade prices exceeds the ten (10) second period, the Bitcoin Index Value will be calculated by taking the last twenty-five (25) Underlying trade prices just prior to the Calculation Time, removing the highest five (5) Underlying trade prices and the lowest five (5) Underlying trade prices, and using the remaining fifteen (15) Underlying trade prices to calculate the relevant Bitcoin or Ether Index Value. The calculation used is a simple average of all fifteen (15) Underlying trade prices, rounded to one decimal point past the precision of the Underlying market. Nadex uses this calculation method as a means of preventing manipulation in the Underlying market to influence the Nadex Expiration Value. In particular, the Nadex Calculation Method prevents a single print in the Underlying market from “knocking-out” a Touch Bracket by virtue of trading a price level design to touch the Floor or the Ceiling.

Each Crypto Contract will be listed with 4 concurrent brackets of the same width, but each with its own offset to the Underlying market. This structure allows a participant who wants to express the opinion that they believe the market is going down by selling the same positive risk to reward composition as a trader who believes the market is going to go higher and therefore wants to buy. For example, if the Indicative Index Value of bitcoin is 21,200 just before the contract creation, and each bracket has a range of 500 points, the following brackets could be generated:

Bracket 1: 21,600 (Ceiling) - 21,100 (Floor) (4:15PM)

Bracket 2: 21,500 (Ceiling) - 21,000 (Floor) (4:15PM)

Bracket 3: 21,400 (Ceiling) - 20,900 (Floor) (4:15PM)

Bracket 4: 21,300 (Ceiling) - 20,800 (Floor) (4:15PM)

As a type of Variable Payout Contract, the Crypto Contracts will have a variable payout at settlement. The settlement payout, or Settlement Value, is dependent on the difference between the Opening Trade Value and the Closing Trade Value or Expiration Value. To illustrate, assume Nadex lists a Bitcoin Touch Bracket Contract with a Floor of 21,100 and a Ceiling of 21,600. At the time a trader wants to enter a transaction, the Underlying bitcoin is trading around 21,200. If the trader thinks the price of bitcoin will go up, he will buy one Bitcoin Touch Bracket Contract at 21,200. In this example, the bracket offering the greatest risk to reward ratio would be referenced above as Bracket 1. The trader’s cost to enter the position is the Opening Trade Value minus the Floor, or 21,200 minus 21,100. Accordingly, the cost to enter the position is \$100 (not

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<sup>3</sup> If 20% of the data set would result in a non-integer number of trade prices, the number of trade prices to be removed from the set will be rounded down. For example, if the number of trade prices collected during the last 10 seconds prior to the close of trading was 31, 20% of the data set would be 6.2 trade prices. As 6.2 is a non-integer number, the value will be rounded down, and the 6 highest and 6 lowest trade prices will be removed from the data set.

including fees). Since all transactions are fully collateralized, \$100 is also the trader's maximum risk. If the Underlying bitcoin value rises and the trader decides to close the position early, the trader's profit is calculated by subtracting the Opening Trade Value from the Closing Trade Value. In this example, if the Underlying bitcoin value rose and the trader closed his position at a price of 21,230, his profit would be 21,230 (Closing Trade Value) minus 21,200 (Opening Trade Value) = \$30 (not including fees).

Suppose that in the above example, instead of closing his position early the trader held his position and the Underlying bitcoin value as reflected in the Bitcoin Indicative Index rose to 21,850 prior to Expiration. Because the Underlying value rose above the Ceiling, the Contract was knocked-out and the Expiration Value for this Contract is equal to the Ceiling level of 21,600. The trader's profit would be the Expiration Value of 21,600 minus the Opening Trade Value of 21,200, or \$400.

Again using the above example, if the trader anticipated that the value of bitcoin would decrease, rather than buying one Bitcoin Touch Bracket Contract, the trader would sell one Bitcoin Touch Bracket Contract. In this case, the bracket with the market price closest to the Ceiling, and thus offering the most favorable maximum risk to reward ratio, would be Bracket 4. To calculate the cost to enter the transaction (and the maximum risk), subtract the Opening Trade Value from the Ceiling, rather than the Floor from the Opening Trade Value. Here, the trader's cost is determined by subtracting the Opening Trade Value of 21,200 from the Ceiling of 21,300, for a cost of \$100 (not including fees). If the bitcoin value rose to 21,230 and the trader wanted to close his position prior to Expiration in order to minimize losses, his Settlement Value is calculated by subtracting the Closing Trade Value (21,230) from the Ceiling (21,300). In this example, the trader would receive \$70 back, and only have lost \$30 (not including fees). However, if the bitcoin value fell to 20,800 or below, the trader's return would be the Opening Trade Value (21,200) minus the Floor (20,800), or \$400 (not including fees).

Nadex plans to list the Crypto Contracts based on the Underlying bitcoin and Ether markets and settle the Crypto Contracts using data from the "ICE Cryptocurrency Data" feed ("ICE Crypto Data"), distributed by ICE Data<sup>®</sup> Connectivity and Feeds, Inc. ("IDCF"). IDCF is part of the Intercontinental Exchange group of entities. In 2018 IDCF partnered with Blockstream Corporation, Inc., a leading provider of blockchain technologies, distributed systems, and crypto-financial infrastructure, to launch the ICE Crypto Data. The ICE Crypto Data is an aggregation of comprehensive multi-asset data from the most widely and actively traded cryptocurrencies from leading trading venues, markets, and exchanges, compiled by Blockstream and distributed by IDCF. The ICE Crypto Data currently includes data from 32 trading venues, with 13 of these venues contributing data pertaining to the bitcoin versus the United States dollar, and 12 of these venues contributing data pertaining to the Ether versus the United States dollar. Nadex can customize the data it receives by selecting any number of the contributing venues. Of the contributing venues, Nadex has selected 11 from which IDCF will provide data to be used in the calculation the Indicative Index for the Bitcoin Cryptocurrency Touch Bracket contract, and 10

from which IDCF will provide data to be used in the calculation of the Indicative Index for the Ether Cryptocurrency Touch Bracket contract (collectively, the “Underlying Trading Venues”), and ultimately the Crypto Contracts’ Expiration Value.<sup>4</sup> Nadex made its selection of venues based on several factors, including CoinGecko’s Trust Score rating, the Underlying Trading Venues’ daily spot volume ranking, AML and KYC policies implementation, regulatory requirements, and the venue’s location in order to provide global coverage.<sup>5</sup> Nadex will monitor CoinGecko’s Trust Score ratings and may add to or remove venues from its data consumption based on these scores. CoinGecko’s rating of the venues Nadex has selected is attached in Exhibit A. The ICE Crypto Data includes a number of data points to aid in the monitoring of the relevant crypto markets such as price discovery, historic data and full-depth market by price and venue, and a 24-hour market overview. Nadex will periodically review the Underlying Trading Venues it has selected to determine the venues’ continued appropriateness for inclusion in the Indicative Index and may add or remove trading venues as appropriate.

The Nadex Crypto Contracts benefit the public interest both as a hedging tool and as speculative trading instruments. Like all Nadex Contracts, the Crypto Contracts will be fully collateralized at the time the transaction is entered. Additionally, the Ceiling and Floor function as a guaranteed stop. Thus, the trader is aware of the maximum risk to enter the transaction and the risk is limited by virtue of the pre-determined Ceiling and Floor prices. Moreover, unlike the Underlying markets, Nadex Contracts trade on a 1:1 ratio, thereby increasing the trader’s potential reward as compared to investing the same dollar amount in the Underlying asset itself. For example, assume the earlier scenario where a bullish trader buys one Bitcoin Touch Bracket Contract priced at 21,200 for a cost of \$100 (excluding fees), and exits the position when the Underlying bitcoin value increases to 21,230, thereby making a \$30 profit (excluding fees). On the other hand, a \$100 investment in the spot bitcoin represents on .163% of a bitcoin (\$100 divided by 21,200). If the spot bitcoin value increased from 21,200 to 21,230, an increase of .05% (30 points divided by 21,200), the trader would only profit \$0.05 (.05% of the trader’s \$100 investment) as opposed to the \$30 profit from the Nadex Bitcoin Touch Bracket Contract based on the same market movement. The converse is also true, that is, if the market moves in the direction opposite the trader’s prediction, the trader may lose more funds trading the Nadex Contract than he would in the spot market. However, the advantage of trading a Touch Bracket

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<sup>4</sup> IDCF will provide Nadex with FTX (Derivatives), Binance (US), Gemini, BitStamp, Exmo, Bitso, Bitflyer (only for bitcoin), ItBit, CEX.IO, OKCoin and BTSE (Derivatives) data.

<sup>5</sup> CoinGecko has been in operation since 2014, and is a website and mobile app that provides live crypto prices, crypto education, and aggregates information regarding the performance of various cryptocurrencies for analysis purposes. CoinGecko launched its Trust Score rating in May 2019 in order to combat fake trading volume among cryptocurrency exchanges. In determining a rating, CoinGecko considers the crypto exchange’s liquidity/web traffic quality, scale of operations, API technical coverage, cybersecurity, team presence (transparency into management team), and past negative incidents (such as regulatory issues, hack incidents, account disputes, etc.). Further explanation as to CoinGecko’s Trust Score rating methodology can be found [here](#). CoinGecko indicates that it is constantly revising, improving and upgrading factors for consideration in its ratings determination, and plans to include trade history analysis, API quality analysis, hot and cold wallet analysis, social media analysis, exchange support turnover time, user reviews, and licensing and regulations analysis in the future.

Contract is the built-in guaranteed stops (the Ceiling and the Floor) to protect the trader from losing more than his known maximum risk. Additionally, the trader may choose to exit his position as the market moves toward the range limits to either take profits or minimize losses.

The Underlying bitcoin and Ether markets are traded 24 hours per day, 7 days per week. Nadex has selected the specific Underlying Trading Venues from which to obtain prices to include in the calculation of the Indicative Index Value that operate from different regions globally, in order to mitigate against the possibility of less activity in the Underlying markets at any given time due to the time of day. Nadex will have at least two dedicated Market Maker liquidity providers who will quote a two-sided market pursuant to the terms of the Market Maker Agreement and subject to the rules of the Exchange. Non-Market Maker Trading Members will have a Position Limit of 100 Contracts. In order to provide sufficient liquidity, Market Makers will be subject to Alternative Position Limits of one-thousand times the standard 100 lot limit, which shall apply on a per strike basis rather to the entire Class of Contracts. Market Makers will also be relieved of their quoting obligations once they have acquired a position of 500 Contracts but will be required to resume their obligations once their position has fallen below 500 Contracts.

Regular trading in the Crypto Contracts will begin at 6:00pm ET on Sunday evening, and expire at 4:15pm ET on Friday afternoon, unless knocked-out prior to the stated Expiration time.

## **DCM CORE PRINCIPLES**

Nadex has identified the following Designated Contract Market (“DCM”) Core Principles as potentially being impacted by the addition of the Crypto Contracts: Core Principle 2 Compliance with Rules; Core Principle 3 Contracts Not Readily Subject to Manipulation; Core Principle 4 Prevention of Market Disruption; Core Principle 5 Position Limits or Position Accountability; Core Principle 7 Availability of General Information; Core Principle 8 Daily Publication of Trading Information; Core Principle 9 Execution of Transactions; Core Principle 10 Trade Information; Core Principle 11 Financial Integrity of Transactions; Core Principle 12 Protection of Markets and Market Participants; and Core Principle 18 Recordkeeping.

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

Core Principle 2 requires the DCM to have the capacity to detect, investigate, and apply appropriate sanctions to any person that violates any rule of the contract market. Nadex has a dedicated Compliance/Regulatory staff that monitors the markets, investigates potential rule violations, and imposes sanctions against individuals who have been determined to have violated the Rules. Nadex has an automated trade surveillance system, Scila, which is capable of detecting potential trade practice violations, and also conducts real-time market monitoring of all trading activity in all Contracts, at all hours the Exchange is open. Nadex is able to set the parameters by which the system detects potential issues. Chapter 9 of the Nadex Rulebook sets forth Nadex’s

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authority to investigate and sanction Members for activity that violates the Exchange Rules. Nadex Rule 2.10 grants Nadex jurisdiction over any Person initiating or executing a transaction on or subject to the Rules of the Exchange, either directly or through an intermediary, and any Person for whose benefit such transaction has been initiated or executed. Nadex's jurisdiction continues notwithstanding the termination of the Person's Exchange Membership. Nadex Rule 3.3 requires all Trading Members and Authorized Traders to comply with the Exchange Rules and to cooperate with Nadex promptly and fully in any investigation, call for information, inquiry, audit, examination or proceeding. Such cooperation may involve a request for the Member's or Authorized Trader's activity in the relevant Underlying market. Accordingly, the listing of the Crypto Contracts will not negatively impact Nadex's ability to comply with this Core Principle.

### Core Principle 3 Contracts Not Readily Susceptible to Manipulation and Core Principle 4 Prevention of Market Disruption

Core Principles 3 and 4 require the DCM to list only contracts that are not readily susceptible to manipulation and to prevent market disruption. Nadex has selected the Underlying bitcoin and Ether markets upon which to base its Crypto Contracts in large part due to their active markets in terms of volume and liquidity, and their popularity among consumers, institutional investors, and other financial professionals. Moreover, the Nadex Calculation Method significantly reduces the potential for manipulation of the relevant Nadex Indicative Index by removing a percentage of the upper and lower Underlying prices from the data set of ICE Crypto Data leading up to Expiration of the Nadex Contracts, with the remaining prices averaged. The ICE Crypto Data is comprised of numerous data points from numerous trading venues, which can be customized by Nadex. Accordingly, an individual trading the Crypto Contracts would not have knowledge of the specific trading venue(s) from which the final set of ICE Crypto Data will be used to calculate the Expiration Value, further preventing the potential for manipulation of the Crypto Contracts' settlement by trading in the Underlying markets.

The Crypto Contracts will have a position limit of 100 lots for non-market maker Members, which in combination with the composition of the ICE Crypto Data and Nadex Calculation Method would make a manipulation attempt essentially cost-prohibitive. To illustrate, using the most extreme example, if a market participant were able to buy or sell a Contract within \$1.00 of the Floor or Ceiling, respectively, the maximum per Contract return would be \$499.00 (\$500 range - \$1 Floor/or Ceiling), excluding fees. With a position limit of 100 Contracts, the maximum potential return any one participant could realize would be \$49,900. In order to facilitate a market move of this magnitude, it is presumed the participant would not only need to clear out the top of market liquidity across multiple exchanges, but also absorb all of the liquidity sitting within 2% of either side of the top of market. As of October 19, 2022, the average +/- 2% liquidity value across the Underlying bitcoin and Ether markets Nadex has selected for its data feed, as reported

by CoinGecko, is over \$2,500,000 for bitcoin and over \$1,800,000 for Ether.<sup>6</sup> Of course, this participant would then be exposed in the Underlying market to an adverse move against their position. Taking it one step further, even cutting by 75% the estimated +/-2% liquidity value, the participant would have a cost in the Underlying of more than 10 times the maximum return they could potentially see on the Nadex Contracts.

The Nadex Calculation Method, which comprises the Nadex Indicative Index, is calculated on a second-by-second basis and works in conjunction with the previous components to further mitigate any risk of potential manipulation of the Underlying market for a positive result in the Underlying market. The Nadex Calculation Method for bitcoin and Ether is constructed to use only executed trade prices on the constituent exchanges, not quotes. Using Nadex's method, all trade prices occurring in the Underlying market as reported in the ICE Cryptocurrency Data within a 10-second window. The highest 20% and lowest 20% of trade prices are removed from the data set, and the remaining data set is averaged, resulting in the Indicative Index Value and likewise, Expiration Value. In the event 25 trade prices are not available within any particular 10 second window, the window may be extended until 25 prices are collected (again outliers are removed and the remaining data set averaged). Analysis of historical market data indicates the event of this occurring would be rare. Under the Nadex Calculation Method, even if a participant was able to absorb all liquidity across multiple exchanges to create off-market prints, those trades would undoubtedly fall into the high/low 20% of the calculation and be discarded from the Indicative Index and Expiration Value calculation, thereby negating any nefarious activity in which a participant may have engaged.

Nadex has dedicated staff to surveil the market and uses the Scila surveillance system to assist with market monitoring at all times the Crypto Contracts will be listed. Additionally, Nadex will monitor the ICE Crypto Data feed for anomalies and disproportionate moves in the prices making up the Expiration Value. Nadex will be able to obtain information from the ICE Crypto Data to assist in Nadex's market surveillance, such as, the relevant bitcoin or Ether trade price, bid and ask prices, activity date and time, venue at which the trade occurred, size, volume, daily high and low, and a number of other data points. IDCF has agreed that upon Nadex's request arising as the result of a regulatory investigation or related market data inquiry, it will share with Nadex additional information that may be provided by Blockstream, to the extent that it is reasonably practicable, and does not violate applicable laws, regulations and/or any of IDCF's contractual obligations.

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<sup>6</sup> As of October 19, 2022, the Underlying Trading Venues providing the Underlying bitcoin and Ether markets selected by Nadex to comprise the ICE Cryptocurrency Data represented a total 24 -hour volume total in value of \$687 million in Bitcoin and \$366 million in Ethereum transactions. In addition, the aggregate value of orders sitting within 2% of either side of the top of book on October 19 was in excess of \$29 million for Bitcoin and \$18 million for Ethereum. Volume and market depth for October 19, 2022 has been included in Exhibit B. While this example highlights specific values from October 19, 2022, these figures are representative of typical volumes and depth of book on an average day.



The Nadex trading system has a cap-check feature that ensures a trader has sufficient funds in his account to fully collateralize his Order if executed before the Order is accepted by the Exchange. Nadex also has the ability to block new Orders and/or cancel working Orders if necessary to prevent market disruption.

Therefore, Nadex has determined that the Crypto Contracts will not be readily susceptible to manipulation and the protections Nadex has in place will minimize disruption in the Nadex Crypto Contracts markets.

### Core Principle 5 Position Limits

Core Principle 5 requires the DCM set position limits or position accountability to reduce the potential threat of market manipulation or congestion. Nadex has set the initial position limit for Trading Members at 100 Contracts, thereby reducing the motivation for an individual to manipulate the Underlying market in order to affect the Nadex settlement, explained in detail above. Contracted Market Makers will not be subject to the 100 Contract position limit in order to provide sufficient liquidity to the market. Market Makers will instead be subject to an Alternative Position Limit of one-thousand times the 100 lot limit for non-Market Maker Trading Members. Additionally, such Alternative Position Limits shall apply not to the entire Class of Touch Bracket Contracts, but to each Touch Bracket Contract in that Class (i.e., per strike). A Market Maker taking advantage of the Alternative Position Limits must, within 1 business day following a request by Nadex's Compliance Department, provide the Nadex Compliance Department with a trade register detailing all trading activity in any account owned or controlled by the Market Maker in the relevant Underlying market during the 15 minutes immediately before and after any Expiration time identified by Nadex's Compliance Department in the request.

### Core Principle 7 Availability of General Information and Core Principle 8 Daily Publication of Information

Core Principles 7 and 8 require the DCM to make available to the public accurate information regarding the contract terms and conditions, as well as daily information on contracts such as expiration value, settlement payout, volume, open interest, and opening and closing ranges. Nadex makes available on its website the Exchange Rulebook, which will include the contract specifications for the Crypto Contracts. In addition to the Rulebook, contract specifications will be detailed on the Nadex website itself. Nadex publishes its Daily Bulletin which contains the preceding contract and transaction information on the website's "Market Data" page. Also published on the Market Data page are Time and Sales, which are updated every 15 minutes, and Results which reports the Expiration Value and Settlement Value for all Nadex Contracts settled throughout the day. Therefore, the listing of the Crypto Contracts will not negatively impact Nadex's ability to comply with these Core Principles.

### Core Principle 9 Execution of Transactions

Core Principle 9 requires the DCM to provide a competitive, open, and efficient market and mechanism for executing transactions that protects the price discovery process. Nadex has two dedicated Market Makers that have committed to pricing a two-sided market. Market participants are able to view the orderbook up to five layers deep (depending on the market activity at any particular time) on the platform. Nadex displays the Time and Sales of all Contracts traded on the Exchange on the Nadex website which is updated every 15 minutes. Therefore, the addition of the Crypto Contracts will not negatively impact Nadex's ability to comply with this Core Principle.

### Core Principle 10 Trade Information

Core Principle 10 requires the DCM to maintain rules and procedures to provide for the recording and safe storage of all identifying trade information in a manner that enables the contract market to use the information to assist in the prevention of customer and market abuses and to evidence any violations of the Exchange Rules. Nadex maintains an electronic audit trail as required by the Commission Regulations which enables Nadex to review all activity on the Exchange.

### Core Principle 11 Financial Integrity of Transactions

Core Principle 11 requires the DCM to establish and enforce rules and procedures for ensuring the financial integrity of transactions entered on the contract market. As with all Contracts offered on Nadex, the Crypto Contracts will be fully collateralized and Members entering a transaction will have knowledge of their maximum risk prior to executing a transaction. All transactions will be cleared by the Nadex DCO.

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

Core Principle 12 requires a DCM to protect markets and market participants from abusive practices committed by any party and to promote fair and equitable trading on the contract market. Chapter 5 of the Nadex Rulebook establishes Rules to protect the market and market participants from abusive, disruptive, fraudulent, noncompetitive, and unfair conduct and trade practices. The Rules apply to all market participants and transactions on the Exchange, and participants will need to comply with the Rules when trading the new Crypto Contracts.

### Core Principle 18 Recordkeeping

Finally, Core Principle 18 requires a DCM to maintain records in accordance with part 45, Swap Data Recordkeeping and Reporting Requirements. In early 2013, Nadex and CFTC staff

engaged in discussions regarding the classification of its Binary Contracts and Variable Payout Contracts following the Dodd-Frank amendments to the Act. The review resulted in the determination that Nadex Binary Contracts and Variable Payout Contracts were deemed to be “swaps” under Section 1a(47) of the Act. On June 30, 2017, Nadex was granted relief in CFTC Letter No. 17-31 (the “Letter”) from Commission Regulations 38.8(b), 38.10, 38.951 (in part), 39.20(b)(2) and Parts 43 and 45. Pursuant to the Letter, Nadex is not required to report its Variable Payout Contracts, which include Touch Bracket Contracts, to a swap data repository. Nadex will continue to meet the requirements for which it has not been granted relief, as well as the conditional requirements set forth in the Letter. Accordingly, the addition of the Crypto Contracts will not negatively impact Nadex’s ability to comply with this Core Principle.

## **DCO CORE PRINCIPLES**

Nadex has identified the following Derivatives Clearing Organization (“DCO”) Core Principles as potentially being impacted by the addition of the Crypto Contracts: Core Principle C Participant and Product Eligibility; Core Principle D Risk Management; Core Principle E Settlement Procedures; Core Principle G Default Rules and Procedures; Core Principle L Public Information.

### **Core Principle C Participant and Product Eligibility**

Core Principle C requires the DCO to establish appropriate standards for determining the eligibility of transactions submitted to it for clearing. Nadex has found that transactions in the fully-collateralized Crypto Contracts are eligible for clearing and not readily susceptible to manipulation. The Crypto Contracts will be based on the relevant Underlying bitcoin or Ether values, the two most popular cryptocurrencies among crypto traders. The ICE Crypto Data is comprised of various order and trade information from numerous trading venues, of which Nadex has selected 11 for the Underlying bitcoin market and 10 for the Underlying Ether market, and may opt for additional venues in the future, thereby reducing the potential for manipulative trading activity in order to impact the Expiration Value and Contract settlement. Nadex has at least two designated Market Makers dedicated to making a two-sided market to provide sufficient liquidity in the new Crypto Contracts. Additionally, Nadex is operationally able to accept the transactions for clearing. Finally, all trading in the Crypto Contracts, like all Nadex products, will be conducted on a fully-collateralized basis, thereby mitigating any credit risk of a particular Member to Nadex or other market participant. Nadex has therefore determined that these Contracts are appropriate to accept for clearing.

## Core Principle D Risk Management

Core Principle D requires the DCO to ensure it possesses the ability to manage the risks associated with discharging its responsibilities through the use of appropriate tools and procedures. Pursuant to Nadex's DCO Orders of Designation, all Contracts cleared through Nadex are fully-collateralized. No Contracts are traded on margin, thereby minimizing the Exchange's risk if a Member becomes insolvent. Likewise, Nadex Members face no credit risk from Nadex because Nadex's obligation to those Members is limited to the amounts those Members deposit with Nadex for trading purposes, and those funds are kept in a segregated Member Property account at the settlement bank and may not be used to satisfy the obligations of Nadex.

## Core Principle E Settlement Procedures

Core Principle E requires the DCO to complete money settlements on a timely basis but not less frequently than once each day, employ an arrangement to eliminate or limit exposure to settlement bank risks, ensure that money settlement are final when effected, and maintain an accurate record of the flow of funds. Like all Nadex Contracts, the new Crypto Contracts will be settled intraday within minutes of the Contract's Expiration. Also, like all Nadex Contracts, the Crypto Contracts will be fully collateralized, thereby limiting Nadex's financial exposure. Nadex Rule 6.3, Settling Contracts at Expiration, requires any Person who believes there has been an error in settlement to report the potential error to Nadex immediately, and in any event within 24 hours of the settlement. The Rule states that if Nadex does not receive notice of a potential error in settlement within 24 hours of the settlement (excluding non-Trading Days), then settlement will be final. Nadex tracks the flow of funds throughout the entirety of the transaction, from the submission of an order through settlement. Nadex does not have netting or offset arrangements with any other clearing organization, and no Contracts are physically settled. Accordingly, Nadex's current practices will continue to comply with this Core Principle following the addition of the Crypto Contracts.

## Core Principle G Default Rules and Procedures

Core Principle G requires the DCO to have rules and procedures designed to allow for the efficient, fair, and safe management of events during which Members become insolvent or otherwise default on the obligations to other Members or the DCO. Nadex does not allow Members to trade if their transactions are not fully collateralized. The Nadex cap-check system will check the Member's account when an Order is placed, and if the account lacks sufficient funds to collateralize the trade, the Order is not accepted by the Exchange. Due to this system check, Members cannot default on their obligations to Nadex as it relates to trade collateralization. As a backup provision, Nadex also has the authority under Nadex Rules 5.3 and 5.4 to cancel any Orders if the Member account lacks sufficient funds to fully collateralize the trade. Nadex Rule 3.3(d) requires each Member to immediately notify Nadex in writing upon becoming aware that he/she/it

becomes the subject of a bankruptcy petition, receivership proceeding, or the equivalent, or being unable to meet any financial obligation as it becomes due. Nadex may also sanction Members under Rule 5.19 for failure to retain sufficient collateral in his/her/its account to meet his/her/its financial obligations. These system checks and applicable Rules will continue to apply following the addition of the Crypto Contracts.

### Core Principle L Public Information

Core Principle L requires the DCO to make available to the public the terms and conditions of each contract, as well as the daily settlement prices, volume, and open interest of the contract. As stated previously, the Rulebook is made available to the public on the Nadex website. Expiration and Settlement Values for the Crypto Contracts will be listed on the Nadex website on the Market Data page under the Results tab, as well as the Daily Bulletin which also shows volume and open interest. Therefore, the addition of the Crypto Contracts will not negatively impact Nadex's ability to comply with this Core Principle.

In accordance with §40.2(a)(2) of the Commission's Regulations, Nadex plans to begin listing the Crypto Contracts for the start of business on or after trade date December 5, 2022.

A complete index of the DCM and DCO Core Principles that indicates whether the Core Principle is applicable and addressed in the text of this submission is attached in Exhibit C. The contract specifications have been outlined in Exhibit D. The contract specifications as they will appear in the Rulebook are set forth in Exhibit E.

Nadex hereby certifies that the additions contained herein comply with the Act, as amended, and the Commission Regulations adopted thereunder. No substantive opposing views were expressed to Nadex with respect to any of these actions.

Nadex hereby certifies that a copy of these additions was posted on its website at the time of this filing.

Should you have any questions regarding the above, please do not hesitate to contact me by telephone at (312) 884-0927 or by email at [Jaime.walsh@nadex.com](mailto:Jaime.walsh@nadex.com).

Sincerely,



Jaime Walsh  
Head of Legal

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## EXHIBIT A

### COINGECKO'S TRUST SCORE RANKING NADEX SELECTED VENUES

#### BITCOIN

Venue Name	Coingecko			Region	AML/KYC Policy	AML/KYC
	Top Exchanges Ranked by Trust Score (10/19/2022)	Trust Score	Exchange Type			
FTX (derivatives)	2	10	Centralized	North America	Yes	<a href="https://assets-global.website-files.com/625f3cf193eb0bdbf6469cba/6324a21cb320e47b1b167d79_Regulatory%20and%20Consumer%20Disclosure">https://assets-global.website-files.com/625f3cf193eb0bdbf6469cba/6324a21cb320e47b1b167d79_Regulatory%20and%20Consumer%20Disclosure</a>
Binance_US	8	10	Centralized	North America	Yes	<a href="https://www.binance.us/en/terms-of-use/#accountCreation">https://www.binance.us/en/terms-of-use/#accountCreation</a>
Gemini	12	10	Centralized	North America	Yes	<a href="https://www.gemini.com/legal/bsa-aml-program#section-bank-secrecy-act-and-anti-money-laundering-compliance-">https://www.gemini.com/legal/bsa-aml-program#section-bank-secrecy-act-and-anti-money-laundering-compliance-</a>
BitStamp	27	8	Centralized	Europe	Yes	<a href="https://www.bitstamp.net/aml-policy/">https://www.bitstamp.net/aml-policy/</a>
Exmo	29	8	Centralized	Europe	Yes	<a href="https://info.exmo.com/en/aml-ctf-kyc-policy/">https://info.exmo.com/en/aml-ctf-kyc-policy/</a>
Bitso	31	8	Centralized	North America	Yes	<a href="https://bitso.com/terms">https://bitso.com/terms</a>
Bitflyer	32	8	Centralized	Asia	Yes	<a href="https://bitflyer.com/en-jp/compliance-structure">https://bitflyer.com/en-jp/compliance-structure</a>
ItBit	40	8	Centralized	North America	Yes	<a href="https://paxos.com/2019/03/29/aml-kyc/#">https://paxos.com/2019/03/29/aml-kyc/#</a>
CEX.IO	41	8	Centralized	Europe	Yes	<a href="https://cex.io/aml-kyc">https://cex.io/aml-kyc</a>
OKCoin	55	7	Centralized	North America	Yes	<a href="https://support.okcoin.com/hc/en-us/articles/360018829051-Risk-Compliance-Disclosure">https://support.okcoin.com/hc/en-us/articles/360018829051-Risk-Compliance-Disclosure</a>
BTSE (derivatives)	86	6	Centralized	Caribbean	Yes	<a href="https://www.btse.com/en/termsandconditions">https://www.btse.com/en/termsandconditions</a>

#### ETHER

Venue Name	Coingecko			Region	AML/KYC Policy	AML/KYC
	Top Exchanges Ranked by Trust	Trust Score	Exchange Type			
FTX (derivatives)	2	10	Centralized	North America	Yes	<a href="https://assets-global.website-">https://assets-global.website-</a>
Binance_US	8	10	Centralized	North America	Yes	<a href="https://www.binance.us/en/terms-of-use/#accountCreation">https://www.binance.us/en/terms-of-use/#accountCreation</a>
Gemini	12	10	Centralized	North America	Yes	<a href="https://www.gemini.com/legal/bsa-aml-program#section-bank-secrecy-act-and-anti-money-laundering-compliance-">https://www.gemini.com/legal/bsa-aml-program#section-bank-secrecy-act-and-anti-money-laundering-compliance-</a>
BitStamp	27	8	Centralized	Europe	Yes	<a href="https://www.bitstamp.net/aml-policy/">https://www.bitstamp.net/aml-policy/</a>
Exmo	29	8	Centralized	Europe	Yes	<a href="https://info.exmo.com/en/aml-ctf-kyc-policy/">https://info.exmo.com/en/aml-ctf-kyc-policy/</a>
Bitso	31	8	Centralized	North America	Yes	<a href="https://bitso.com/terms">https://bitso.com/terms</a>
ItBit	40	8	Centralized	North America	Yes	<a href="https://paxos.com/2019/03/29/aml-kyc/#">https://paxos.com/2019/03/29/aml-kyc/#</a>
CEX.IO	41	8	Centralized	Europe	Yes	<a href="https://cex.io/aml-kyc">https://cex.io/aml-kyc</a>
OKCoin	55	7	Centralized	North America	Yes	<a href="https://support.okcoin.com/hc/en-us/articles/360018829051-Risk-Compliance-Disclosure">https://support.okcoin.com/hc/en-us/articles/360018829051-Risk-Compliance-Disclosure</a>
BTSE (derivatives)	86	6	Centralized	Caribbean	Yes	<a href="https://www.btse.com/en/termsandconditions">https://www.btse.com/en/termsandconditions</a>

## EXHIBIT B

### AVERAGE 24-HOUR VOLUME AND MARKET DEPTH

Venue Name	24 hour volume and 2% market depth 10/19/2022 - Coingecko			
	24hr BTC vol	2/-2%	24hr ETH vol	2/-2%
FTX (derivatives)	\$ 245,220,217.00	\$ 7,312,828.00	\$ 258,005,645.00	\$ 6,526,556.50
Binance_US	\$ 168,140,759.00	\$ 4,921,838.50	\$ 20,851,728.00	\$ 2,811,187.00
Gemini	\$ 14,242,159.00	\$ 683,312.00	\$ 6,141,881.00	\$ 634,023.50
BitStamp	\$ 26,612,171.00	\$ 6,022,457.00	\$ 11,106,507.00	\$ 2,578,296.50
Exmo	\$ 4,665,888.00	\$ 314,200.50	\$ 3,421,114.00	\$ 183,151.00
Bitso	\$ 1,194,214.00	\$ 428,111.00	\$ 236,319.00	\$ 117,268.00
Bitflyer	\$ 725,970.00	\$ 272,916.00	Not applicable	Not applicable
ItBit	\$ 5,256,444.00	\$ 4,176,844.50	\$ 1,198,072.00	\$ 707,250.00
CEX.IO	\$ 347,015.00	\$ 370,660.50	\$ 450,591.00	\$ 670,343.00
OKCoin	\$ 16,629,041.00	\$ 1,515,735.00	\$ 4,262,524.00	\$ 976,671.00
BTSE (derivatives)	\$ 204,941,346.00	\$ 3,867,819.00	\$ 60,499,946.00	\$ 2,995,948.00
<b>Total</b>	<b>\$ 687,975,224.00</b>	<b>\$ 29,886,722.00</b>	<b>\$ 366,174,327.00</b>	<b>\$ 18,200,694.50</b>
<b>Average</b>	<b>\$ 62,543,202.18</b>	<b>\$ 2,716,974.73</b>	<b>\$ 36,617,432.70</b>	<b>\$ 1,820,069.45</b>

## EXHIBIT C

### Designated Contract Market (“DCM”) Core Principles

Core Principle Number	Core Principle Name	Addressed in or Not Applicable to Self-Certification
1	Designation as Contract Market	Not applicable (designation granted)
2	Compliance with Rules	Addressed
3	Contracts Not Readily Subject to Manipulation	Addressed
4	Prevention of Market Disruption	Addressed
5	Position Limitations or Accountability	Addressed
6	Emergency Authority	Not applicable (Nadex Rulebook, 2.4 Emergency Rules)
7	Availability of General Information	Addressed
8	Daily Publication of Trading Information	Addressed
9	Execution of Transactions	Addressed
10	Trade Information	Addressed
11	Financial Integrity of Transactions	Addressed
12	Protection of Markets and Market Participants	Addressed
13	Disciplinary Procedures	Not applicable (Nadex Rulebook, Chapter 9 Rule Enforcement)
14	Dispute Resolution	Not applicable (Nadex Rulebook, 10.2 – 10.4 Arbitration)



15	Governance Fitness Standards	Not applicable (Nadex Rulebook, 2.2 Service Restrictions, 11.2 Service and Disciplinary History)
16	Conflicts of Interest	Not applicable (Nadex Rulebook, 2.6 Voting, 2.9 Trading Limitations, 11.1 Non-Public Information, 11.3 Voting)
17	Composition of Governing Boards of Contract Markets	Not applicable (internal review and appointment of directors)
18	Recordkeeping	Addressed
19	Antitrust Considerations	Not applicable
20	System Safeguards	Not applicable (internal controls and policies in place)
21	Financial Resources	Not applicable (capital requirements and quarterly reporting compliant)
22	Diversity of Boards of Directors	Not applicable (not public company, internal review and appointment of directors)
23	Securities and Exchange Commission	Not applicable

## Derivatives Clearing Organization (“DCO”) Core Principles

Core Principle Number	Core Principle Name	Addressed in or Not Applicable to Self-Certification
A	Compliance	Not applicable
B	Financial Resources	Not applicable (capital requirement and quarterly reporting compliant)
C	Participant and Product Eligibility	Addressed
D	Risk Management	Addressed
E	Settlement Procedures	Addressed
F	Treatment of Funds	Not applicable (Nadex Rulebook Chapter 8 Member Funds)
G	Default Rules and Procedures	Addressed
H	Rule Enforcement	Not applicable (Nadex Rulebook, Chapter 9 Rule Enforcement, 10.2 – 10.4 Arbitration)
I	System Safeguards	Not applicable (internal controls and policies in place)
J	Reporting	Not applicable
K	Recordkeeping	Not applicable (Nadex maintains all required records for at least 5 years)
L	Public Information	Addressed
M	Information Sharing	Not applicable (member of Joint Audit Committee, Joint Compliance Committee, Intermarket Surveillance)

		Group, and signatory to the International Information Sharing Memorandum of Understanding and Agreement)
N	Antitrust Considerations	Not applicable
O	Governance Fitness Standards	Not applicable (Nadex Rulebook, 2.2 Service Restrictions, 11.2 Service and Disciplinary History, internal review and appointment of directors)
P	Conflicts of Interest	Not applicable (Nadex Rulebook, 2.6 Voting, 2.9 Trading Limitations, 11.1 Non-Public Information, 11.3 Voting)
Q	Composition of Governing Boards	Not applicable (internal review and appointment of directors)
R	Legal Risk	Not applicable (Nadex Rulebook Chapter 6)

## EXHIBIT D

Reference in Rulebook	Asset	Duration/Close Time	Action	Effective Date
12.24	Bitcoin Cryptocurrency “Touch Bracket” Variable Payout Contract	Weekly, 4:15pm ET Close or when knocked-out	Add new contract and specifications	12/5/2022
12.25	Ether Cryptocurrency “Touch Bracket” Variable Payout Contract	Weekly, 4:15pm ET Close or when knocked-out	Add new contract and specifications	12/5/2022

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## EXHIBIT E

*The Contract Specifications set forth below will appear  
in the Rulebook as 12.24 and 12.25*

### 12.24 BITCOIN CRYPTOCURRENCY “TOUCH BRACKET” VARIABLE PAYOUT CONTRACTS

(a) SCOPE – These Rules shall apply to the Class of Contracts referred to as the Bitcoin Cryptocurrency (“Bitcoin”) Touch Bracket Variable Payout Contracts, referred to as a ‘Touch Bracket’, issued by Nadex.

(b) UNDERLYING – The Underlying for this Class of Contracts is the spot bitcoin cryptocurrency as reported in the ICE<sup>®</sup> Cryptocurrency Data<sup>7</sup> aggregated by Blockstream<sup>®</sup> Corporation<sup>8</sup> and distributed by ICE Data<sup>®</sup> Connectivity and Feeds, Inc.<sup>9</sup>, herein referred to as “IDCF BIT”, quoted in US dollars.

(c) SOURCE AGENCY – The Source Agency is Nadex.

(d) TYPE – The Type of Contract is a Variable Payout Contract.

(e) PAYOUT CRITERION – The Payout Criterion for each Contract will be set by Nadex at the time the Variable Payout Contracts are initially issued. For the Bitcoin Touch Brackets, the Payout Criteria for the Contracts will be set as follows:

(i) WEEKLY BITCOIN TOUCH BRACKET VARIABLE PAYOUT CONTRACTS, Expiration is the earlier of (a) 4:15PM ET on the Last Trade Day of the contract listing, or (b) when the Bitcoin Index Value is equal to or greater than the Ceiling, or equal to or less than the Floor. Nadex shall list a set of four (4) Touch Bracket Variable Payout Contracts, each referred to as a ‘Touch Bracket’, that open at 6:00PM ET on the first Trade Day of the week, with overlapping ranges, which conform to the Payout Criteria listed below.

(1) CONTRACT 1: The Ceiling shall be  $X + 400$ ; The Floor shall be  $X - 100$ .

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<sup>7</sup> ICE<sup>®</sup> is a registered mark of IntercontinentalExchange, Inc. (“ICE”). Nadex is not affiliated with ICE or ICE Data Connectivity and Feeds, Inc., and the Bitcoin Cryptocurrency “Touch Bracket” Variable Payout Contracts are not sponsored, endorsed, sold or promoted by ICE or ICE Data Connectivity and Feeds, Inc. in any way.

<sup>8</sup> Blockstream<sup>®</sup> is a registered mark of Blockstream Corporation (“Blockstream”). Nadex is not affiliated with Blockstream and the Bitcoin Cryptocurrency “Touch Bracket” Variable Payout Contracts are not sponsored, endorsed, sold or promoted by Blockstream.

<sup>9</sup> ICE<sup>®</sup> is a registered mark of IntercontinentalExchange, Inc. (“ICE”) and ICE Data<sup>®</sup> is a registered mark of Intercontinental Exchange Holdings, Inc (“ICE Holdings”). Nadex is not affiliated with ICE, ICE Holdings, or ICE Data Connectivity and Feeds, Inc., and the Bitcoin Cryptocurrency “Touch Bracket” Variable Payout Contracts are not sponsored, endorsed, sold or promoted by ICE, Ice Holdings, or ICE Data Connectivity and Feeds, Inc. in any way.

(2) CONTRACT 2: The Ceiling shall be  $X + 300$ ; The Floor shall be  $X - 200$ .

(3) CONTRACT 3: The Ceiling shall be  $X + 200$ ; The Floor shall be  $X - 300$ .

(4) CONTRACT 4: The Ceiling shall be  $X + 100$ ; The Floor shall be  $X - 400$ .

(5) DOLLAR MULTIPLIER – The Dollar Multiplier shall be 1.

(6) In each case, “X” equals the last IDCF BIT value, as reported by the Source Agency, rounded to the nearest 1.

(ii) Upon the early Expiration of a Touch Bracket, Nadex may list a new Touch Bracket with a Ceiling of  $X + 400$  (or 100) and a Floor of  $X - 100$  (or 400) where X equals the Ceiling (or Floor) of the Touch Bracket that expired early. The newly listed Touch Bracket will have the same Last Trade Day as originally established for the expired Touch Bracket and the same Dollar Multiplier as the expired Touch Bracket.

(f) MINIMUM TICK –The Minimum Tick size for the Bitcoin Touch Bracket Variable Payout Contracts shall be 1.

(g) POSITION LIMIT –The Position Limit for the Bitcoin Touch Bracket Variable Payout Contracts shall be 100 Contracts.

(h) MARKET MAKER ALTERNATIVE POSITION LIMIT – The Position Limit for the Bitcoin Touch Bracket Variable Payout Contracts for contracted Market Makers shall be 100,000 Contracts per strike level.

(i) LAST TRADING DATE – The Last Trading Date in a Series is the same date as the Settlement Date.

(j) SETTLEMENT DATE – The Settlement Date of the Contract shall be the same date as the Expiration Date.

(k) EXPIRATION DATE – The Expiration Date of the Contract shall be the date on which the Bitcoin Touch Bracket Expiration Value is released by the Source Agency.

(l) SETTLEMENT VALUE – The Settlement Value is the amount paid to the holder of either a Short or Long Variable Payout Contract on Settlement Date. The Settlement Value of a Variable Payout Contract is determined as described in the definition for Long and Short Variable Payout Contracts.

(m) BITCOIN INDEX VALUE – The Source Agency shall calculate and produce a Bitcoin Index Value once each second throughout the life of the Bitcoin Touch Bracket Contracts. That is, each second the Source Agency will calculate a Bitcoin Index Value by taking by taking all IDCF BIT trade prices occurring in the ten (10) seconds leading up to the Calculation Time, provided at least twenty-five (25) trade prices are captured during the ten (10) second period.

removing the highest twenty (20) percent of IDCF BIT trade prices and the lowest twenty (20) percent of IDCF BIT trade prices from the data set<sup>10</sup>, and using the remaining IDCF BIT trade prices to calculate the Bitcoin Index Value for that second. The calculation used is a simple average of the remaining IDCF BIT trade prices in the data set, rounded to one decimal point past the precision of the Underlying market. In the event the time it takes to collect at least twenty-five (25) IDCF BIT trade prices exceeds the ten (10) second period, the Bitcoin Index Value will be calculated by the Source Agency by taking the last twenty-five (25) IDCF BIT trade prices just prior to the Calculation Time, removing the highest five (5) IDCF BIT trade prices and the lowest five (5) IDCF BIT trade prices, and using the remaining fifteen (15) IDCF BIT trade prices to calculate the Bitcoin Index Value. The calculation used is a simple average of all fifteen (15) IDCF BIT trade prices, rounded to one decimal point past the precision of the Underlying market.

(n) EXPIRATION VALUE – The Expiration Value is the Bitcoin Index Value released by the Source Agency at Expiration on the Expiration Date.

(o) CONTINGENCIES – If no level is actually announced on the Expiration Date due to a delay, postponement or otherwise in such release announcement by the Source Agency, the Settlement Date will be delayed until the Underlying number is released for that Series.

## 12.25 ETHER CRYPTOCURRENCY “TOUCH BRACKET” VARIABLE PAYOUT CONTRACTS

(a) SCOPE – These Rules shall apply to the Class of Contracts referred to as the Ether Cryptocurrency (“Ether”) Touch Bracket Variable Payout Contracts, referred to as a ‘Touch Bracket’, issued by Nadex.

(b) UNDERLYING – The Underlying for this Class of Contracts is the spot Ether cryptocurrency reported in the ICE<sup>®</sup> Cryptocurrency Data<sup>11</sup>, aggregated by Blockstream<sup>®</sup> Corporation<sup>12</sup> and distributed by ICE Data<sup>®</sup> Connectivity and Feeds, Inc.<sup>13</sup>, herein referred to as “IDCF ETH”, quoted in US dollars.

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<sup>10</sup> If 20% of the data set would result in a non-integer number of trade prices, the number of trade prices to be removed from the set will be rounded down. For example, if the number of trade prices collected during the last 10 seconds prior to the close of trading was 31, 20% of the data set would be 6.2 trade prices. As 6.2 is a non-integer number, the value will be rounded down, and the 6 highest and 6 lowest trade prices will be removed from the data set.

<sup>11</sup> ICE<sup>®</sup> is a registered mark of IntercontinentalExchange, Inc. (“ICE”). Nadex is not affiliated with ICE or ICE Data Connectivity and Feeds, Inc., and the Ether Cryptocurrency “Touch Bracket” Variable Payout Contracts are not sponsored, endorsed, sold or promoted by ICE or ICE Data Connectivity and Feeds, Inc. in any way.

<sup>12</sup> Blockstream<sup>®</sup> is a registered mark of Blockstream Corporation (“Blockstream”). Nadex is not affiliated with Blockstream and the Ether Cryptocurrency “Touch Bracket” Variable Payout Contracts are not sponsored, endorsed, sold or promoted by Blockstream.

<sup>13</sup> ICE<sup>®</sup> is a registered mark of IntercontinentalExchange, Inc. (“ICE”) and ICE Data<sup>®</sup> is a registered mark of Intercontinental Exchange Holdings, Inc (“ICE Holdings”). Nadex is not affiliated with ICE, ICE Holdings, or ICE

(c) SOURCE AGENCY – The Source Agency is Nadex.

(d) TYPE – The Type of Contract is a Variable Payout Contract.

(e) PAYOUT CRITERION – The Payout Criterion for each Contract will be set by Nadex at the time the Variable Payout Contracts are initially issued. For the Ether Touch Brackets, the Payout Criteria for the Contracts will be set as follows:

(i) WEEKLY ETHER TOUCH BRACKET VARIABLE PAYOUT CONTRACTS, Expiration is the earlier of (a) 4:15PM ET on the Last Trade Day of the Contract listing, or (b) when the Ether Index Value is equal to or greater than the Ceiling, or equal to or less than the Floor. Nadex shall list a set of four (4) Touch Bracket Variable Payout Contracts, each referred to as a ‘Touch Bracket’, that open at 6:00PM ET on the first Trade Day of the week, with overlapping ranges, which conform to the Payout Criteria listed below.

(1) CONTRACT 1: The Ceiling shall be  $X + 200$ ; The Floor shall be  $X - 50$ .

(2) CONTRACT 2: The Ceiling shall be  $X + 150$ ; The Floor shall be  $X - 100$ .

(3) CONTRACT 3: The Ceiling shall be  $X + 100$ ; The Floor shall be  $X - 150$ .

(4) CONTRACT 4: The Ceiling shall be  $X + 50$ ; The Floor shall be  $X - 200$ .

(5) DOLLAR MULTIPLIER – The Dollar Multiplier shall be 1.

(6) In each case, “X” equals the last IDCF ETH value, as reported by the Source Agency, rounded to the nearest 1.

(ii) Upon the early Expiration of a Touch Bracket, Nadex may list a new Touch Bracket with a Ceiling of  $X + 200$  (or 50) and a Floor of  $X - 50$  (or 200) where X equals the Ceiling (or Floor) of the Touch Bracket that expired early. The newly listed Touch Bracket will have the same Last Trade Day as originally established for the expired Touch Bracket and the same Dollar Multiplier as the expired Touch Bracket.

(f) MINIMUM TICK –The Minimum Tick size for the Ether Touch Bracket Variable Payout Contracts shall be 1.

(g) POSITION LIMIT –The Position Limit for the Ether Touch Bracket Variable Payout Contracts shall be 100 Contracts.

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Data Connectivity and Feeds, Inc., and the Ether Cryptocurrency “Touch Bracket” Variable Payout Contracts are not sponsored, endorsed, sold or promoted by ICE, ICE Holdings, or ICE Data Connectivity and Feeds, Inc. in any way.

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(h) MARKET MAKER ALTERNATIVE POSITION LIMIT – The Position Limit for the Ether Touch Bracket Variable Payout Contracts for contracted Market Makers shall be 100,000 Contracts per strike level

(i) LAST TRADING DATE – The Last Trading Date in a Series is the same date as the Settlement Date.

(j) SETTLEMENT DATE – The Settlement Date of the Contract shall be the same date as the Expiration Date.

(k) EXPIRATION DATE – The Expiration Date of the Contract shall be the date on which the Ether Touch Bracket Expiration Value is released by the Source Agency.

(l) SETTLEMENT VALUE – The Settlement Value is the amount paid to the holder of either a Short or Long Variable Payout Contract on Settlement Date. The Settlement Value of a Variable Payout Contract is determined as described in the definition for Long and Short Variable Payout Contracts.

(m) ETHER INDEX VALUE – The Source Agency shall calculate and produce a Ether Index Value once each second throughout the life of the Ether Touch Bracket Contracts. That is, each second the Source Agency will calculate a Ether Index Value by taking by taking all IDCF ETH trade prices occurring in the ten (10) seconds leading up to the Calculation Time, provided at least twenty-five (25) trade prices are captured during the ten (10) second period, removing the highest twenty (20) percent of IDCF ETH trade prices and the lowest twenty (20) percent of IDCF ETH trade prices from the data set<sup>14</sup>, and using the remaining IDCF ETH trade prices to calculate the Ether Index Value for that second. The calculation used is a simple average of the remaining IDCF ETH trade prices in the data set, rounded to one decimal point past the precision of the Underlying market. In the event the time it takes to collect at least twenty-five (25) IDCF ETH trade prices exceeds the ten (10) second period, the Ether Index Value will be calculated by the Source Agency by taking the last twenty-five (25) IDCF ETH trade prices just prior to the Calculation Time, removing the highest five (5) IDCF ETH trade prices and the lowest five (5) IDCF ETH trade prices, and using the remaining fifteen (15) IDCF ETH trade prices to calculate the Ether Index Value. The calculation used is a simple average of all fifteen (15) IDCF ETH trade prices, rounded to one decimal point past the precision of the Underlying market.

(n) EXPIRATION VALUE – The Expiration Value is the Ether Index Value released by the Source Agency at Expiration on the Expiration Date.

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<sup>14</sup> If 20% of the data set would result in a non-integer number of trade prices, the number of trade prices to be removed from the set will be rounded down. For example, if the number of trade prices collected during the last 10 seconds prior to the close of trading was 31, 20% of the data set would be 6.2 trade prices. As 6.2 is a non-integer number, the value will be rounded down, and the 6 highest and 6 lowest trade prices will be removed from the data set.

(o) CONTINGENCIES – If no level is actually announced on the Expiration Date due to a delay, postponement or otherwise in such release announcement by the Source Agency, the Settlement Date will be delayed until the Underlying number is released for that Series.

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