



December 14, 2017

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 Rule Amendments: Nadex Adds Bitcoin Variable Payout Contract – 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 submits to the Commission its amendments to the Nadex Rulebook which adds a new Variable Payout (“Spread”) Contract to its current product listing. Nadex hereby submits the terms and conditions of the new Bitcoin Variable Payout Contracts (the “Bitcoin Contracts” or the “Contracts”) as represented in the following new Rule:

- **RULE 12.25 BITCOIN VARIABLE PAYOUT CONTRACTS**

Nadex plans to list cash-settled Weekly Spread Contracts based on the Tera<sup>®</sup> Bitcoin Price Index (the “TeraBit Index<sup>sm</sup>”) to its retail market participants.<sup>1</sup> On September 11, 2014, Tera<sup>®2</sup> (“Tera”) self-certified a submission describing the creation of its USD/Bitcoin Non-Deliverable

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<sup>1</sup> Tera<sup>®</sup>, Tera<sup>®</sup> Bitcoin Price Index, and TeraBit Index<sup>sm</sup> are service and trademarks of Tera Advanced Technologies, LLC.

<sup>2</sup> Nadex has no ownership interest in Tera or the Tera Bitcoin Price Index, and is not an affiliate of Tera or Tera Advanced Technologies, LLC.

Forward contract and its TeraBit Index. Shortly thereafter, Nadex filed a self-certification in November 2014 to list Bitcoin Binary Contracts based upon the underlying TeraBit Index. At the time Nadex listed its Bitcoin Binary Contracts, bitcoin was a growing, yet still novel concept, which had not quite gained mainstream acceptance. After a period of subdued interest in these contracts, Nadex decided to delist the Bitcoin Binary Contracts on December 16, 2016.

Although the first bitcoins were issued in 2009, the currency was still in a development stage when Nadex listed its Bitcoin Binary Contracts in December 2014. At that time the underlying value of the cryptocurrency was valued at 378.03 according to the TeraBit Index, and when Nadex delisted its Binary Contract one year ago, the value had risen to 754.38. Currently, the TeraBit Index indicates the bitcoin value has risen to levels that have exceeded 16,000, a twenty-fold increase over the short one year period since the delisting of the Binary Contract. Moreover, the number of exchanges offering physical bitcoin has grown significantly, as has daily trading volume. Estimated daily transaction volume in US dollars has been above \$2 billion since November 22, 2017, with reported daily volume recently exceeding \$5 billion<sup>3</sup>. To compare, the transaction volume of the bitcoin on the day Nadex originally launched its Bitcoin Binary Contracts was approximately \$70 million, and approximately \$200 million when it was delisted two years later<sup>4</sup>. Cryptocurrencies in general are garnering increased attention, if not outright recognition, globally. Nadex's own Members have expressed a renewed interest in bitcoin, and over the past month, Nadex has received many requests from its Members to relist a bitcoin contract.

The number of merchants who accept bitcoin as payment has also grown significantly, perhaps most notable among them in recent news is PriceWaterhouseCoopers, one of the "Big Four" accounting firms<sup>5</sup>. However, with such a highly volatile value, merchants who accept bitcoin as payment for goods and services experience uncertainty in the bitcoin's change in value from the time they accept the payment, until the time they are able to convert it to, for example, US dollars. A merchant who accepts bitcoin in order to make payment more convenient for the consumer assumes a risk not experienced in modern commerce in the United States – that the value of the payment may decrease dramatically before it is converted to USD. Unlike airlines that are able to hedge the cost of oil, or farmers who hedge the year's corn harvest by trading in the futures market, merchants who accept bitcoin as payment have limited options to minimize their risk. Nadex Weekly Contracts can provide a readily accessible and relatively low cost hedging vehicle for this payment structure.

Recently, the CME Group ("CME"), Cboe Futures Exchange ("CFE"), and Cantor Exchange ("Cantor") filed self-certification submissions with the Commission describing their intent to begin

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<sup>3</sup> <https://www.quandl.com/data/BCHAIN/ETRVU-Bitcoin-Estimated-Transaction-Volume-USD>.

<sup>4</sup> *Id.*

<sup>5</sup> <https://www.wsj.com/articles/pricewaterhousecoopers-accepts-fee-in-bitcoin-1512036992>;  
<http://www.businessinsider.com/a-big-four-accounting-firm-is-accepting-bitcoin-payments-2017-11>.

listing contracts based on bitcoin. In addition to offering a means of hedging bitcoin, Nadex aims to offer a bitcoin-based product that is complementary to, or in some cases, competitive with those offered by these similar institutions.

In its December 1, 2017 press release, the Commission noted that “[i]n working with the Commission, CME, CFE, and Cantor have set an appropriate standard for oversight over these bitcoin contracts given the CFTC’s limited statutory ability to oversee the cash market for bitcoin,” and further, “[w]e expect that the futures exchanges, through information sharing agreements, will be monitoring the trading activity on the relevant cash platforms for potential impacts on the futures contracts’ price discovery process, including potential market manipulation and market dislocations due to flash rallies and crashes and trading outages.”<sup>6</sup> As Nadex indicated in its November 26, 2014 submission regarding the listing of its Bitcoin Binary Contracts, both Tera Exchange and Nadex have information sharing agreements in place and processes to monitor the markets, discover price discrepancies and surveil for potential manipulation.

As of the date of this submission, Tera Bitcoin Price Index is comprised of price data from nine different bitcoin exchanges from around the world<sup>7</sup>. Tera’s stated standards for consideration of a new bitcoin exchange for inclusion in its Index require that the exchange:

- Serve an international customer base;
- Provide an API with live prices;
- Provide a bid-offer spread for an immediate sale and an immediate purchase;
- Have a minimum trade size that is less than \$1,000USD;
- Have daily and monthly trading volume that meets minimum acceptable levels as determined by Tera;
- Permit withdrawals and deposits of fiat currency as well the transfer of bitcoin within a commercially reasonable period of time;
- Meet regulatory, operational and technological criteria established by Tera;
- Charge reasonable transaction fees (exchanges that charge zero fees are excluded);
- Execute and maintain an Information Sharing Agreement with Tera<sup>8</sup>.

Tera has developed a proprietary algorithm for determining the TeraBit Index price which removes extraneous prices thereby minimizing the possibility that the price could be affected by market manipulation. As we noted in our original filing for the Bitcoin Binary Contract in 2014, CFTC Associate Director Tom Leahy explained in the Commission’s Global Markets Advisory Committee

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<sup>6</sup> Commodity Futures Trading Commission (December 1, 2017). *CFTC Statement on Self-Certification of Bitcoin Products by CME, CFE and Cantor Exchange* (Press release). Retrieved from <http://www.cftc.gov/PressRoom/PressReleases/pr7654-17>.

<sup>7</sup> BitKonan, HitBTC, Kraken, Bitfinex, Independent Reserve, LakeBTC, Bitstamp, itBit, OKCoin. <http://www.Tera.com/Home/TeraBit#TB Accordions>.

<sup>8</sup> <http://www.Tera.com/Home/TeraBit#TB Accordions>.

meeting on October 9, 2014 that the TeraBit Index is “calculated using a volume weighted methodology that also trims outliers. Back-testing of the Index showed that the Index consistently reflected prevailing bitcoin prices, and that the Index was not influenced by outlier prices.”<sup>9</sup>

In addition to the accepted methodology, Tera uses market surveillance to detect any possibility of market manipulation. Tera has enlisted the help of the National Futures Association (“NFA”) to monitor its markets, coupled with its own monitoring of the TeraBit Index and the markets from which it obtains its price data. As indicated above, Tera requires all of the bitcoin exchanges that contribute price data to sign an Information Sharing Agreement, which includes the requirement to make available a real-time feed of trades, bids and offers, volume and other non-confidential market data. Further, these agreements state that if a party suspects that trading activity on the other party’s market was used or is being used to manipulate the Index, or attempt to cause such manipulation, price distortions or market disruptions in either party’s market, confidential information can be requested for regulatory or investigatory purposes. Likewise, Nadex and Tera have entered into a similar Information Sharing Agreement with each other. Each party has agreed to assist the other by making available information regarding trades, bids, offers, volume, and other non-confidential market data, as well as confidential information if either party suspects that trading activity on the other party’s market was used or is being used to manipulate the TeraBit Index, or attempt to cause manipulation, price distortions or other disruptions on either party’s market. Due to Tera’s accepted methodology for calculating the TeraBit Index price, its surveillance, and bitcoin’s blockchain transparency, Nadex believes that the Tera Bitcoin Price Index is an accurate and reliable indicator of the bitcoin value, and will prove to be an effective underlying market upon which Nadex bases its Bitcoin Spread Contracts, as it was from 2014 – 2016 for the Bitcoin Binary Contracts.

Nadex will have at least one dedicated Market Maker who will make a two sided market up to five minutes prior to expiration in these contracts subject to the rules of the exchange. The Nadex Bitcoin Spread Contracts will have an Expiration Value equal to the last TeraBit Index value immediately prior to expiration of the Contracts. It is not possible for an early release of the Contracts’ Expiration Value, as the final TeraBit Index price that will be used as the Expiration Value is unknown until the Nadex Contracts expire. If the TeraBit Index is unavailable or in the discretion of the Exchange the last available print is not appropriate for settlement, Nadex may obtain bitcoin pricing data for settlement purposes from one or more bitcoin exchanges or other data provider(s) that we deem appropriate under the circumstances, and in such circumstance the Exchange will determine the Expiration Value. On the Expiration Date, Nadex will publish on its website the Expiration Value for each listed Contract as soon as practicable after the expiration of that Contract.

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<sup>9</sup> Commodity Futures Trading Commission Global Markets Advisory Committee Meeting October 9, 2014. Remarks of Tom Leahy, 1:49:25.

Like Nadex's current offering of Variable Payout Contracts, otherwise known as "Spread" Contracts, the new Bitcoin Spread Contracts will consist of a Floor and a Cap, and the payout to the holder of a short position will be determined by subtracting the Closing Trade Value from the Opening Trade Value, as those terms are defined in the Nadex Rulebook, if the Spread Contract was closed by an offsetting transaction before Expiration, or subtracting the Expiration Value from the Opening Trade Value if the Spread Contract was held until Expiration, and multiplying the resulting number by the Dollar Multiplier. The payout to the holder of a long position will be determined by subtracting the Opening Trade Value from the Closing Trade Value, if the Spread Contract was closed by an offsetting transaction before Expiration, or by subtracting the Opening Trade Value from the Expiration Value, if the Spread Contract was held until Expiration, and multiplying the resulting number by the Dollar Multiplier. Unique to the Bitcoin Spread Contracts, and due to the underlying market's high volatility, the spread between the Floor and Cap will depend on the value of the Terabit Index just prior to the listing of the contract. The Floor and Cap will be determined using the contract specifications set forth in Rules 12.25 and the bitcoin value reported by the TeraBit Index five minutes prior to the listing of the contract. For example, if the Weekly Bitcoin Spread Contract is scheduled to list at 8:00am ET, the value of the bitcoin as indicated by the Terabit Index at 7:55am ET will be used as "X". If X is between \$12,000 and \$19,999.99, the Spread Contract's Cap will be  $X + 7,500$  and the Floor will be  $X - 7,500$ , for a 15,000 point spread. The Dollar Multiplier in all instances will be .10, making this first scenario a \$1,500 contract. If, however, X is between \$20,000 and \$29,999.99, the Spread Contract's Cap will be  $X + 10,000$  and the Floor will be  $X - 10,000$ , and thus a 20,000 point spread and a \$2,000 contract. The contract specifications in Rule 12.25 will also accommodate a TeraBit Index value falling between \$3,000 and \$5,999.99, between \$6,000 and \$8,999.99, and between \$9,000 and \$11,999.99. Should the TeraBit Index move above \$29,999.99, or below \$3,000, Nadex may refrain from listing any Bitcoin Spread Contract, or may list a Spread Contract with different ranges based on the then-current underlying TeraBit Index value. In any event, the Floor shall not be below \$0. The minimum tick size for the Bitcoin Spread Contracts will be \$.50, which will represent a \$5.00 move in the underlying market. Given the volatility of the bitcoin market, the flexibility to adjust the Spread Contract's specifications is necessary to prevent the listing of contracts where X is above the Cap or below the Floor. As with all of Nadex's contracts, the Bitcoin Contracts will be fully collateralized. Retail market participants will likely find the fully collateralized nature of the Contracts as particularly beneficial due to bitcoin's high volatility. Participants will be able to hedge their bitcoin price risks or otherwise trade the Nadex Bitcoin Contracts without fear of unlimited losses should the bitcoin value take an unexpected turn.

Nadex intends to charge a \$2.00 per contract fee in connection with the trading and settlement of its Bitcoin Spread Contract. However, in connection with the launch of this new contract, initially, Members will only be charged a \$1.00 trading fee per side, per Bitcoin Spread Contract traded, which will be capped at \$50 per order. Members will also be charged an uncapped

settlement fee of \$1.00 per side, per contract, for those contracts that settle resulting in a payout to the Member. Market Makers initially will be charged an uncapped trading fee of \$0.50 per side, per Bitcoin Spread Contract traded, as well as an uncapped \$0.50 fee, per side, per contract, for each contract that settles resulting in a payout to the Market Maker. If the per-contract settlement payout is greater than \$0 but the total fee to be charged for the position exceeds the total settlement payout for that position, Nadex will reduce its fee to the amount of the total settlement payout for that position (that is, Nadex will not charge a settlement fee that exceeds a settlement payout). After this initial launch period, all Members, including Market Maker Members, will be charged an uncapped trading fee of \$2.00 per side traded, per Bitcoin Spread Contract traded, as well as an uncapped settlement fee of \$2.00 per side, per contract, for those contracts that settle resulting in a payout to the holder of the contract. Market Makers will not be subject to the wide spread surcharge for transactions in the Bitcoin Spread Contract. Pursuant to Nadex Rule 3.8(e)(Dues, Fees, and Expenses Payable By Members), “[i]f Nadex determines in the future to impose dues or additional fees, the Member will be provided notice of the change at the time the amended fees are filed with the Commission. The new fee structure will be implemented no earlier than on the first available trade date for which the change may be implemented according to the Commission’s self-certification filing requirements as set forth in Commission Regulation Section 40.6(a).” Accordingly, the higher \$2.00 trade and settlement fees will take effect no earlier than January 2, 2018. Nadex will also post a notice of the fee change on the Notices page of its website when a date has been determined.

Members will have a Position Limit of 50 contracts, however, Market Makers will not be subject to the Position Limit. Market Makers will be relieved of their 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 for the Bitcoin Spread Contract will open at 8:00am ET on Monday morning, and expire at 3:00pm ET on Friday afternoon. Due to the 2017 Christmas holiday, the Weekly Bitcoin Spread Contract will close at its normal time of 3:00pm ET on December 22, 2017, however, it will not be offered on December 25, 2017 when the Exchange will be closed. The Weekly Bitcoin Spread Contract will re-open at 8:00am ET on trade date December 26, 2017 and will settle at its regular time on December 29, 2017. Likewise, for the 2018 New Year’s Day holiday, the Weekly Bitcoin Spread Contract will not be offered on January 1, 2018 when the Exchange will be closed. The Weekly Bitcoin Spread Contract will re-open at 8:00am ET on trade date January 2, 2018, and will settle at its regular time on January 5, 2018.

## **DCM CORE PRINCIPLES: BITCOIN SPREAD CONTRACTS**

Nadex has identified the following Designated Contract Market (“DCM”) Core Principles as potentially being impacted by the addition of the Bitcoin 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 11 Financial Integrity of Transactions.

Core Principle 2 requires the DCM have comparable fee structures for members, persons with trading privileges and independent software vendors receiving equal access to, or services from the DCM. When the new fees for the Bitcoin Spread Contracts take effect, both Members and Market Maker Members will be \$2.00 per contract per side. Thus both member types will be subject to the same fee structure, and will not impair Nadex’s ability to comply with this Core Principle. Core Principle 2 also 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, SMARTS<sup>®</sup>, 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. The system will monitor the new Weekly Bitcoin Spread Contract in the same manner, and Nadex has the authority to investigate and sanction Members for activity occurring in this market in violation of the Rules. Nadex has an Information Sharing Agreement with Tera, and Tera has entered into Information Sharing Agreements with the Bitcoin exchanges from which it obtains data for use in its TeraBit Price Index. These Agreements allow for access to transaction data and trader level data. Accordingly, the listing of the Bitcoin Spread Contract will not negatively impact Nadex’s ability to comply with this Core Principle.

Core Principles 3 and 4 require the DCM to list only contracts that are not readily susceptible to manipulation and to prevent market disruption. Tera has proprietary method of calculation for its TeraBit Index, which makes the Index not readily susceptible to manipulation. The method uses a volume weighted compilation of prices from multiple different bitcoin exchanges<sup>10</sup> from around the world, after any anomalous prices have been filtered out. Nadex will monitor the data feed from Tera for anomalies and disproportionate moves in the index making up the settlement price, and may inquire with Tera and request trader level data in the event issues are discovered. Additionally, we note that it is unlikely that an individual would be motivated to manipulate the underlying market in

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<sup>10</sup> At the time of this submission Tera is collecting data from nine bitcoin exchanges.

order to manipulate a settlement at Nadex, given the initial position limit being established for Members of 50 spread contracts, or the equivalent of 5 bitcoin, given the costs of transacting in the physical bitcoin space. Nadex has dedicated staff to surveil the market, and uses the SMARTS system to assist with market monitoring at all times the Bitcoin Spread Contract will be listed. This Core Principle also requires a DCM to monitor the pricing of the index to which a contract will be settled and monitor the continued appropriateness of the methodology for deriving the index. It further requires a DCM that uses an index traded at another venue have agreements that allow it to access market information on the activities of the traders in the reference market. Nadex and Tera have entered into a Mutual Information Sharing Agreement whereby each will provide non-confidential information regarding trading activity and certain confidential information in the event either suspects market manipulation. Therefore, Nadex's ability to comply with these Core Principles will not be negatively impacted.

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 50 contracts, the equivalent of 5 bitcoin, reducing the motivation for an individual to manipulate the underlying market in order to affect the Nadex settlement. Market Makers will not be subject to the 50 contract position limit in order to provide sufficient liquidity to the market. Nadex does not believe its ability to comply with this Core Principle will be negatively impacted by the listing of a Bitcoin Spread Contract.

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, volume, open interest, and opening and closing ranges. Nadex makes available on its website the Exchange Rulebook, as well as the Daily Bulletin which contains the preceding information. The Results page on the website also publishes the Expiration Value and Settlement Value for all Nadex contracts settled during that week. Contract specifications for the Bitcoin Spread Contracts will be set forth in the Rulebook and linked on the Nadex website. Daily settlement prices, volume, open interest, and opening and closing ranges for the new contracts will be included on the Daily Bulletin and posted on the Nadex website. Therefore, the listing of the Bitcoin Spread Contracts will not negatively impact Nadex's ability to comply with these Core Principles.

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 Bitcoin Spread Contracts will be fully collateralized, and Members entering a transaction will have knowledge of their maximum risk when entering that transaction. The addition of a Bitcoin Spread Contract will therefore not negatively impact Nadex's ability to comply with this Core Principle.

## **DCO CORE PRINCIPLES: BITCOIN SPREAD CONTRACTS**

Nadex has identified the following Derivatives Clearing Organization (“DCO”) Core Principles as potentially being impacted by the addition of the Bitcoin Spread Contract: Core Principle C Participant and Product Eligibility; Core Principle L Public Information.

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 Bitcoin Spread Contracts are eligible for clearing and not readily susceptible to manipulation. The Contracts will be based on the underlying TeraBit Index, which has demonstrated and been recognized by the Commission to provide a reliable value for bitcoin. Nadex has a designated Market Maker to make a two-sided market for these Contracts, thereby supporting liquidity. Additionally, Nadex is operationally able to accept the transactions for clearing. Finally, all trading in the 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 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. Settlement values for the Bitcoin Spreads Contract will be listed on the Nadex website on the ‘Results Page’, as well as the Daily Bulletin which also shows volume and open interest. This Core Principle also requires the DCO to make public each clearing and other fee that the DCO charges its Members. Nadex currently makes its Fee Schedule available on the Fees page of its website. When the \$2.00 trading and settlement fees for the Bitcoin Spread Contract take effect, the Fee Schedule will be updated to reflect the change, and will continue to be posted on the Nadex website. Therefore, the addition of the 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 implement these Rule changes and begin listing the Nadex Bitcoin Variable Payout (“Spread”) Contracts for the start of business on trade date December 18, 2017. Changes to the trading and settlement fees for the Bitcoin Spread Contract will take effect no earlier than January 2, 2018.

These Rule changes have been outlined in Exhibit A. The amendments to the Rulebook are set forth in Exhibit B, and changes to the Fee Schedule are in Exhibit C. Any deletions are stricken out while the amendments and/or additions are underlined.

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

**EXHIBIT A**

<b>Rule</b>	<b>Asset</b>	<b>Duration/Close Time</b>	<b>Action</b>	<b>Effective Date</b>
12.25	Bitcoin Variable Payout Contracts	Weekly 3:00PM ET Close Time	Add new Weekly Spread Contracts based on the underlying Tera Bitcoin Price Index	12/18/2017

## **EXHIBIT B**

### Addition of Rule 12.25

*(The following Rule amendments are underlined and deletions are stricken out)*

RULES 1.1 – 12.24 [UNCHANGED]

#### RULE 12.25 BITCOIN VARIABLE PAYOUT CONTRACTS

(a) SCOPE – These Rules shall apply to the Class of Contracts referred to as the Bitcoin Variable Payout Contracts issued by Nadex.

(b) UNDERLYING – The Underlying for this Class of Contracts is the value of the bitcoin digital currency as indicated by the Tera<sup>®</sup> Bitcoin Price Index, calculated by the Tera<sup>®11</sup>.

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

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

(e) ISSUANCE – For each planned release by the Source Agency of the Underlying, Nadex will issue various Contracts, each of a different Series. A new issuance of Contracts will commence no later than two (2) business days following the Expiration Date.

(f) 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 Variable Payout Contract, the Payout Criteria for the Contracts will be set as follows;

(i) WEEKLY BITCOIN VARIABLE CONTRACTS, 3:00 PM ET – At the commencement of trading in a Weekly Bitcoin Variable Payout Contract, Nadex shall list one Weekly Bitcoin Variable Contract, having a total contract range and contract value based on the value of the underlying Tera Bitcoin Price Index at the time the Weekly Variable Contract is created, which conforms to the Payout Criteria listed below:

(1) WEEKLY VARIABLE PAYOUT CONTRACT ‘SPREAD’ – If the Tera Bitcoin Price Index is valued between \$3,000 and \$5,999.99 at five (5) minutes prior to the listing of the Contract, the Payout Criterion shall be as follows: :

(aa) CAP – The Cap shall be  $X + 3,000$ .

(bb) FLOOR – The Floor shall be  $X - 3,000$ .

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<sup>11</sup> Tera<sup>®</sup> and Tera<sup>®</sup> Bitcoin Price Index are service and trademarks of Tera Advanced Technologies, LLC.

(cc) DOLLAR MULTIPLIER – The Dollar Multiplier shall be .10.

(2) WEEKLY VARIABLE PAYOUT CONTRACT ‘SPREAD’ – If the Tera Bitcoin Price Index is valued between \$6,000 and \$8,999.99 at five (5) minutes prior to the listing of the Contract, the Payout Criterion shall be as follows: :

(aa) CAP – The Cap shall be  $X + 4,000$ .

(bb) FLOOR – The Floor shall be  $X - 4,000$ .

(cc) DOLLAR MULTIPLIER – The Dollar Multiplier shall be .10.

(3) WEEKLY VARIABLE PAYOUT CONTRACT ‘SPREAD’ – If the Tera Bitcoin Price Index is valued between \$9,000 and \$11,999.99 at five (5) minutes prior to the listing of the Contract, the Payout Criterion shall be as follows:

(aa) CAP – The Cap shall be  $X + 5,000$ .

(bb) FLOOR – The Floor shall be  $X - 5,000$ .

(cc) DOLLAR MULTIPLIER – The Dollar Multiplier shall be .10.

(4) WEEKLY VARIABLE PAYOUT CONTRACT ‘SPREAD’ – If the Tera Bitcoin Price Index is valued between \$12,000 and \$19,999.99 at five (5) minutes prior to the listing of the Contract, the Payout Criterion shall be as follows:

(aa) CAP – The Cap shall be  $X + 7,500$ .

(bb) FLOOR – The Floor shall be  $X - 7,500$ .

(cc) DOLLAR MULTIPLIER – The Dollar Multiplier shall be .10.

(5) WEEKLY VARIABLE PAYOUT CONTRACT ‘SPREAD’ – If the Tera Bitcoin Price Index is valued between \$20,000 and \$29,999.99 at five (5) minutes prior to the listing of the Contract, the Payout Criterion shall be as follows:

(aa) CAP – The Cap shall be  $X + 10,000$ .

(bb) FLOOR – The Floor shall be  $X - 10,000$ .

(cc) DOLLAR MULTIPLIER – The Dollar Multiplier shall be .10.

(4) In each case, “X” equals the Tera Bitcoin Price Index price, as reported by the Source Agency prior to listing, rounded to the nearest 100.

(ii) Nadex may widen or narrow the spread range of the Bitcoin Variable Payout Contracts, refrain from listing, or list additional Variable Payout Contracts with different ranges of Payout Criteria at its discretion based on the value of the underlying Tera Bitcoin Price Index or existing market conditions at the time of the contract listing or throughout the life of the contract and in accordance with the CEA and Commission Regulations. In the event the Tera Bitcoin Price Index is valued below \$3,000, Nadex may adjust the contract parameters such that the Floor shall not be below \$0.00.

(g) MINIMUM TICK – The Minimum Tick size for the Bitcoin Variable Payout Contracts shall be \$.50.

(h) POSITION LIMIT – The Position Limit for the Bitcoin Variable Payout Contracts shall be 50 contracts<sup>12</sup>.

(i) LAST TRADING DATE – The Last Trading Date in a Series shall be the same date as the Expiration 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 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) EXPIRATION VALUE – The Expiration Value is the price or value of the Tera Bitcoin Price Index released by the Source Agency on the Expiration Date, rounded to the nearest \$0.10.

(n) CONTINGENCIES – If no Expiration Value is announced by the Source Agency on the Expiration Date, the Settlement Date will be delayed until the Expiration Value is released for that Series by the Source Agency.

RULES 12.26 – 12.78 [UNCHANGED]

*End of Rulebook.*

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<sup>12</sup> Market Makers shall not be subject to the 50 contract Position Limit. Market Makers will be relieved of their quoting obligations after reaching a position level of 500 contracts.

# EXHIBIT C

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North American Derivatives Exchange, Inc., 311 South Wacker Drive, Suite 2675, Chicago, IL 60606

U.S Toll-Free +1 (877) 77 NADEX info@nadex.com www.nadex.com

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## NADEX FEE SCHEDULE

### DIRECT TRADING MEMBERS

#### Membership Fee:

- Nadex does not charge a Membership fee to join the Exchange.

#### Initial Deposit:

- Direct Trading Members are required to make an initial deposit of at least \$250; no minimum balance is required thereafter.

#### Transaction Fees:

Nadex charges no fee for orders placed, cancelled or amended.

Direct Trading Members incur an Exchange trading fee per contract per side for each trade executed based on order size according to the following schedule:

- \$1.00 for each lot traded from 1 up to and including 50 lots (excluding Bitcoin);
- An additional \$0.00 for each lot over 50 lots.
- \$2.00 for each Bitcoin lot traded (Position Limit 50).

#### Settlement Fees:

Nadex charges no fee for contracts that settle out-of-the-money.

Direct Trading Members incur an Exchange settlement fee per contract per side for each contract that settles in-the-money based on the position size at expiration according to the following schedule:

- \$1.00 for each lot settled in-the-money (excluding Bitcoin).
- \$2.00 for each lot settled in a Bitcoin contract resulting in a payout.

If the per-contract settlement payout is greater than \$0, but the total fee to be charged for the position exceeds the total settlement payout for that position, Nadex will reduce its fee to the amount of the total settlement payout for that position (that is, Nadex will not charge a settlement fee that exceeds a settlement payout).

### FCM MEMBERS

#### Membership Fee:

- Nadex does not charge a FCM Membership fee to join the Exchange.

#### Minimum Balance:

- FCM Members are required to make an initial deposit of at least \$100,000 and to maintain a minimum balance of uncommitted funds of \$50,000.

#### Transaction Fees:

Nadex charges no fee for orders placed, cancelled or amended.

FCM Members incur an Exchange trading fee per contract per side for each contract executed based on order size according to the following schedule:

- \$0.35 for each lot traded from 1 up to and including 10 lots;
- \$0.00 for each lot traded over 10.

#### Settlement Fees:

FCM Members incur an Exchange settlement fee per contract per side for each contract that settles in-the-money based on the position size at expiration according to the following schedule:

- \$0.35 for each lot settled in-the-money.

If the per-contract settlement payout is greater than \$0, but the total fee to be charged for the position exceeds the total settlement payout for that position, Nadex will reduce its fee to the amount of the total settlement payout for that position (that is, Nadex will not charge a settlement fee that exceeds a settlement payout).

Nadex charges no fee for contracts that settle out-of-the-money.

### MARKET MAKERS

#### Membership Fee:

- Nadex does not charge Market Makers a membership fee.

#### Minimum Balance:

- Market Makers are required to make an initial deposit of at least \$500,000 and to maintain a minimum balance of uncommitted funds of \$250,000 to collateralize the trades executed on Nadex.

#### Transaction Fees:

Nadex charges no fee for Market Maker quotes placed, cancelled or amended.

Nadex charges its non-intermediated Market Makers an Exchange trading fee of \$0.50 per contract per side for each trade executed on Nadex (excluding Bitcoin).

Nadex charges its non-intermediated Market Makers an Exchange trading fee of \$2.00 per contract per side for each Bitcoin trade executed on Nadex.

#### Settlement Fees:

Nadex charges its non-intermediated Market Makers an Exchange settlement fee of \$0.50 per contract per side for each contract that settles in-the-money (excluding Bitcoin). Nadex charges its non-intermediated Market Makers an Exchange settlement fee of \$2.00 per contract per side for each Bitcoin contract that results in a payout. If the total fee to be charged for the position exceeds the total settlement payout for that position, Nadex will reduce its fee to the amount of the total settlement payout for that position (that is, Nadex will not charge a settlement fee that exceeds a settlement payout).

Nadex charges no fee for contracts that settle out-of-the-money.

#### Additional Fees:

Market Makers will be assessed a Wide Spread Surcharge equal to 50% of the average per lot profit above \$2.00 (after standard transaction and settlement fees), in a given month. Market Makers will not be assessed a Wide Spread Surcharge for any Bitcoin contract.

### SYSTEM PROVIDERS

Nadex is interested in discussing partnership opportunities with systems providers.

Anyone interested in becoming a Nadex FCM Member or Market Maker or pursuing a partnership as a systems provider should contact us.

# NADEX FEE SCHEDULE CHART:

EFFECTIVE JANUARY 3, 2017 January , 2018

## TRADING FEES

### Direct Member Exchange Trading Fees

Lots Traded	Fees Per Side
Lots 1-50 (excluding Bitcoin)	\$1.00
Lots above 50	\$ 0.00
Bitcoin	\$2.00

### FCM Member Exchange Trading Fees

Lots Traded	Fees Per Side
All lots traded	\$0.35

### Market Maker Member Exchange Trading Fees

Lots Traded	Fees Per Side
All lots traded (excluding Bitcoin)	\$0.50
Bitcoin	\$2.00 (no wide spread surcharge)

## SETTLEMENT FEES

### Direct Member Settlement Fees\*

Lots Settled in-the-money	Fees Per Side
All lots settled in-the-money (excluding Bitcoin)	\$1.00
Bitcoin	\$2.00

### FCM Member Settlement Fees\*

Lots Settled in-the-money	Fees Per Side
All lots settled in-the-money	\$0.35

### Market Maker Member Settlement Fees\*

Lots Settled in-the-money	Fees Per Side
All lots settled in-the-money (excluding Bitcoin)	\$0.50
Bitcoin	\$2.00 (no wide spread surcharge)

## ADDITIONAL MARKET MAKER FEE

Average per Lot Profit per Month	Wide Spread Surcharge
Over \$2.00	50% above \$2.00

\*If the per-contract settlement payout is greater than \$0, but the total fee to be charged for the position exceeds the total settlement payout for that position, Nadex will reduce its fee to the amount of the total settlement payout for that position (that is, Nadex will not charge a settlement fee that exceeds a settlement payout).

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