

**TRADE PRACTICE
RULE ENFORCEMENT REVIEW
NORTH AMERICAN
DERIVATIVES EXCHANGE**



Division of Market Oversight

July 28, 2017

**RULE ENFORCEMENT REVIEW OF
NORTH AMERICAN DERIVATIVES EXCHANGE (NADEX)
TRADE PRACTICE SURVEILLANCE**

Commodity Futures Trading Commission – Division of Market Oversight

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I. Rule Enforcement Review Scope

The Division of Market Oversight (“Division”) has completed a rule enforcement review of the trade practice surveillance program of North American Derivatives Exchange Inc. (“Nadex” or “Exchange”).¹ The review focused on the Exchange’s compliance with two core principles under Section 5(d) of the Commodity Exchange Act (“Act” or “CEA”) (Core Principles 2 (*Compliance With Rules*) and 12 (*Protection of Markets and Market Participants*)),² and with several rules under Part 38 of the Commission’s regulations (§§ 38.150, 38.152–153, 38.155–159, and 38.650–651).³ The Division’s review of the Exchange’s trade practice surveillance program covered the period from December 12, 2014 to December 11, 2015 (“target period”).⁴

In conducting this review, Division staff interviewed Exchange officials and staff. Nadex provided a demonstration of the electronic systems that it uses to perform trade practice surveillance. The Division also reviewed numerous documents produced by Exchange staff, including the following:

¹ The Division’s rule enforcement reviews seek to present an analysis of an exchange’s overall compliance capabilities during the period under review. Such reviews deal only with programs directly addressed in the review and do not assess all programs or core principles. The Division’s analyses, conclusions, and recommendations are based, in large part, upon the Division’s evaluation of a sample of investigations and other exchange documents. This evaluation process, in some instances, identifies specific deficiencies in particular exchange investigations or methods but is not designed to uncover all instances in which an exchange does not address effectively all exchange rule violations or other deficiencies.

The findings and recommendations in this rule enforcement review are limited to the Exchange and its products. This rule enforcement review, and the findings and recommendations herein, represent the view of the Division only, and do not necessarily represent the position or view of the Commission or of any other office or division of the Commission.

² 7 U.S.C. 1 *et seq.*

³ See Appendix B for a table of Core Principles and Regulations reviewed. Because the substantive requirements of Core Principle 12 that relate to trade practice surveillance are similar to those of Core Principle 2, the Division has evaluated compliance with Core Principle 2 and the selected regulations listed herein rather than conduct a separate review of Core Principle 12 and its associated regulations, Commission regulations 38.650-651.

⁴ The Division previously reviewed the Exchange’s trade practice surveillance program in its November 15, 2013 rule enforcement review, which covered the period from June 15, 2011 through June 15, 2012.

- policies and procedures for conducting trade practice surveillance, including the Nadex Compliance Procedures Manual (“Compliance Manual”);
- organizational charts and summaries of personnel and staffing;
- investigation documents and associated work product for a sample of the trade practice preliminary reviews and the one investigation related to potential trade practice violations that was closed during the target period;
- minutes of meetings held during the target period of the Regulatory Oversight Committee (“ROC”) of the Nadex Board of Directors;
- the market maker agreements between the Exchange and the two market makers active on the Exchange platform during the target period; and
- logs tracking the disposition of preliminary reviews and investigations relating to trade practice surveillance matters.

The Division analyzed Nadex’s trade practice surveillance program to determine whether it complied with the core principles and Commission regulations set forth above, and whether there were any deficiencies with, or recommendations for, the program. For purposes of this report, a *deficiency* is an area where the Division believes that the Exchange is not in compliance with a Commission regulation and must take corrective action, and a *recommendation* concerns an area where the Division believes that the Exchange should improve its compliance program. Positively, the Division found that Nadex allocates staff, information technology, and other resources to comply with Core Principles 2 and 12. The Exchange also maintains a rulebook for market participants and policies and procedures for Exchange staff relevant to Core Principles 2 and 12. However, the Division also identified certain shortcomings that raise concerns about the Exchange’s trade practice surveillance program. The Division made three separate

recommendations relating to compliance with Commission regulations 38.153 (Capacity to detect and investigate rule violations) and 38.155 (Compliance staff and resources). The Division also found three deficiencies pursuant to Commission regulation 38.158 (Investigations and investigation reports).

In addition, although Core Principle 7 (*Availability of General Information*) was not a focus of this review, the Division identified one compliance issue under this core principle during the course of its examination. Material terms of Nadex's Market Maker Agreements were not readily available on the Exchange's website during the target period, pursuant to Commission regulation 38.401(a). Accordingly, the Division found one deficiency relating to compliance with Commission regulation 38.401.

The Division provided the Exchange an opportunity to review and comment on a draft of this report on June 5, 2017. On June 13, 2017, Division staff conducted an exit conference with officials from the Exchange to discuss the findings, recommendations, and deficiencies set forth in the report.

II. Summary of Findings, Recommendations, and Deficiencies

A. Findings without Recommendations or Deficiencies

1. Rulebook (Core Principle 2, Commission regulations 38.150)

- The Nadex Rulebook (“Rulebook” or “Exchange Rules”) sets forth access requirements, terms and conditions of contracts to be traded on the Exchange, and rules prohibiting abusive trading practices on the Exchange.

2. Automated trade surveillance system (Core Principle 2, Commission regulation 38.156)

- The Division found that Nadex’s automated trade practice surveillance tools comply with Commission regulation 38.156. The Exchange uses the Securities Markets Automated Research Trading and Surveillance System (“SMARTS”), a third-party automated trade practice surveillance database / analytic tool with alert functionality, for real-time monitoring and reconstruction of trading activity.
- SMARTS provides a graphical view of trading in a specific market at a specific time. For order, trade, and clearing information, SMARTS provides compilation, retrieval, sorting, filtering, and analysis functionality.
- SMARTS includes reports from the Almas real-time alert generator. The system also includes ARC, which contains a group of report templates with ad hoc customizable parameters and filter rules for each report.
- Nadex staff reviews Almas alerts on a daily basis, and usually closes alerts by the end of the day on which they were generated.

3. Abusive trading practices prohibited (Core Principle 2, Commission regulation 38.152)

- Chapter 5 of the Rulebook prohibits the trade practice violations enumerated in Commission regulation 38.152. See Nadex Rule 5.19 (Prohibited Transactions and Activities); Nadex Rule 5.7 (Handling of Customer Orders).
- The Exchange’s Rulebook in effect during the target period did not specifically prohibit conduct that violates bids or offers or demonstrates intentional or reckless disregard for the orderly execution during the closing period. However, after the target period, the Exchange filed a certification revising section (w) of its Rule 5.19 to

prohibit market participants from engaging in any activity that constitutes fraudulent or abusive trading, including but not limited to violating bids or offers; demonstrating intentional or reckless disregard for the orderly execution of transactions during the closing period; or spoofing.⁵

4. Real-time market monitoring (Core Principle 2, Commission regulation 38.157)

- The Division found that the Exchange’s Compliance Department is responsible for real-time market monitoring.
- During the target period, Nadex Rule 5.14 provided that the Exchange, in its discretion, may cancel a trade in a spread contract that has been executed on the market at a price that is inconsistent with prevailing market conditions due to improper or erroneous orders or quotes being matched on the Market (“Erroneous Trade”). The Rulebook was silent regarding whether binary option trades may be cancelled. After the target period, the Exchange revised Exchange Rule 5.14(a) to provide that, with respect to binary option contracts, Nadex will generally not cancel or adjust an Erroneous Trade except in extraordinary circumstances as determined by the Exchange.⁶

5. Ability to obtain information (Core Principle 2, Commission regulation 38.159)

- The Nadex Rulebook provides compliance staff with the ability to obtain testimony and books and records from Exchange members in investigations and hearings.

⁵ The Exchange filed its certification revising section (w) of Exchange Rule 5.19 on June 16, 2017, with an effective date of July 3, 2017. The Exchange also made two changes to its Rulebook regarding abusive trading practices on January 20, 2017 (after the target period), with an effective date of February 6, 2017. First, the Rulebook in effect during the target period prohibited “knowingly” trading against customer orders, but did not address “unknowingly” trading against customer orders. The Exchange revised section (c)(i) of Exchange Rule 5.7 to prohibit trading against customer orders. Second, the Rulebook in effect during the target period did not specifically reference front running, and the Exchange revised section (d) of Exchange Rule 5.7 to prohibit front running. The Exchange’s rule changes address the Division’s concerns during the target period relating to Commission regulation 38.152.

⁶ The Exchange filed a certification revising section (a) of Exchange Rule 5.14 on June 16, 2017, with an effective date of July 3, 2017. The revision addresses the Division’s concerns with respect to the version of Exchange Rule 5.14 in effect during the target period.

B. Findings with Recommendations

1. Capacity to detect and investigate rule violations (Core Principle 2, Commission regulation 38.153)
 - Section 4c(a)(5)(C) of the CEA prohibits spoofing, as do Nadex’s rules. Nadex represented that it has the ability to use deleted order reports in ARC to detect spoofing by Exchange members. However, the Exchange explained that it reviewed ARC reports for spoofing only on an infrequent, ad hoc basis during the target period. It asserted that it would be impracticable for any Nadex member to engage in spoofing, given that members enter trades manually on the Exchange platform. The Division believes that Nadex did not adequately support this assertion, and that the Exchange’s policy during the target period of infrequent monitoring could potentially have resulted in undetected spoofing.⁷
 - After the target period, on June 13, 2017, Nadex acknowledged to the Division that spoofing can in fact occur on its markets, and informed the Division that the Exchange had opened two investigations relating to potential spoofing in January 2017. Nadex represented that it has begun reviewing a manual report on a daily basis to detect potential spoofing, and that it is also working on an automated SMARTS alert for spoofing.
 - **Recommendation: Nadex should promptly complete its development of a surveillance program to detect spoofing on its markets. Nadex should provide the Division with a written description of the Exchange’s spoofing detection program once it has completed its development of such program.**
2. Compliance staff and resources (Core Principle 2, Commission regulation 38.155)
 - Nadex’s regulatory structure includes the Chief Regulatory Officer (“CRO”), Regulatory Officer, Compliance Associate, and Legal Counsel. The Regulatory Officer and the Compliance Associate

⁷ The Division notes that, as a general matter, spoofing can occur through manual trading. See CFTC Press Release No. 7486-16, “Federal Court in Chicago Orders U.K. Resident Navinder Singh Sarao to Pay More than \$38 Million in Monetary Sanctions for Price Manipulation and Spoofing” (Nov. 17, 2016), available at <http://www.cftc.gov/PressRoom/PressReleases/pr7486-16> (“Defendants utilized manual spoofing techniques to place and cancel large orders with no intention of execution.”); CFTC Press Release No. 7504-16, “Federal Court Orders Chicago Trader Igor B. Oystacher and 3Red Trading LLC to Pay \$2.5 Million Penalty for Spoofing and Employment of a Manipulative and Deceptive Device, while Trading Futures Contracts on Multiple Futures Exchanges” (Dec. 20, 2016), available at <http://www.cftc.gov/PressRoom/PressReleases/pr7504-16> (spoofing scheme involved “manually” placing orders).

together comprise the Exchange's Compliance Department. The regulatory personnel (other than the Regulatory Officer) have a variety of duties at the Exchange unrelated to trade practice surveillance. For example, the CRO also serves as the Chief Compliance Officer ("CCO") of the Nadex derivatives clearing organization ("DCO"), and the Legal Counsel serves as the Exchange's corporate secretary.

- The documentation that the Division received from the Exchange indicates that one member of the Compliance Department – *i.e.*, the Regulatory Officer – conducted substantially all trade practice surveillance during the target period.
- The Exchange's trading volume has increased substantially in recent years, including a nearly six-fold increase from the 2011-2012 target period of the Division's prior Nadex Rule Enforcement Review to the target period for this Rule Enforcement Review, without an increase in Compliance Department staff or resources.
- During the target period, Nadex's SMARTS system generated 8,677 automated Almas alerts. The alerts led to only one formal investigation regarding potential trade practice violations.
- The Division is concerned that Nadex may have insufficient staff dedicated to adequately investigate potential trade practice violations, especially because the Exchange closed certain Almas alerts without investigating potential trade practice violations, where such investigations appear to have been warranted. The lack of trade practice investigations could suggest that Nadex's trade practice surveillance program is not detecting violations occurring on the Exchange. For example, the Exchange stated that it did not regularly conduct trade practice surveillance during the target period to detect potential spoofing.
- **Recommendation: Nadex should consider whether its staff and resources are sufficient or properly allocated to detect and investigate potential trade practice violations. To that end, the Exchange should:**
 - **Perform an evaluation to determine if Nadex's current staffing levels or allocation of staffing levels allow it to adequately investigate potential trade practice violations (especially given that the Exchange closed certain Almas alerts without investigating potential**

trade practice violations, where such investigations appear to have been warranted).⁸

- **Perform an evaluation to determine if Nadex’s trade practice surveillance program is detecting all types of trade practice violations that can occur on the Exchange, including violations that may currently go undetected or that may be unique to a non-intermediated exchange, and whether Nadex’s current staffing levels or allocation of staffing levels allow it to perform such detection.**
 - **The Exchange should provide the Division with a copy of its evaluation and any changes the Exchange plans to make based on the evaluation’s findings.**
3. Compliance staff and resources (Core Principle 2, Commission regulation 38.155)
- Nadex’s Regulatory Officer is primarily responsible for providing one-on-one training to new Compliance Department staff. Documentation that the Exchange provided indicates that the one-on-one training sessions include material that is not included in the Exchange’s Compliance Manual.
 - **Recommendation: Nadex should revise its Compliance Manual to incorporate the material covered in one-on-one training sessions with the Regulatory Officer.**

C. Findings with a Deficiency Requiring Corrective Action

1. Investigations and investigation reports (Core Principle 2, Commission regulation 38.158)
- In several instances, Nadex failed to adequately investigate or document potential rule violations. Specifically, Nadex did not further investigate after conducting preliminary reviews based on Pre-Arranged, Money Passing, and Futures Price Divergence Almas alerts. Rather than investigating members for possible trade practice violations, Nadex suspended the members’ accounts and subsequently terminated the members for inactivity.

⁸ See the discussion below under Commission regulation 38.158 regarding matters that were closed after preliminary reviews, where the Division believes trade practice investigations may have been warranted under the circumstances.

- By terminating members for inactivity rather than conducting a thorough investigation, Nadex did not conduct substantive trade practice investigations when warranted. Further, terminated members could reapply for Exchange membership years later and there would be an unresolved matter that would be too late to fully investigate.
 - **Deficiency: Pursuant to Commission regulation 38.158, the Exchange must conduct investigations upon the discovery or receipt of information that indicates a reasonable basis for finding that a violation may have occurred. After conducting an investigation, the Exchange must create an investigation report in accordance with Commission regulations 38.158(c) and 38.158(d).**
2. Investigations and investigation reports (Core Principle 2, Commission regulation 38.158)
- The Exchange suspended certain members' accounts based on possible trade practice violations, and requested information from the members in connection with preliminary reviews. In two matters where members cooperated in preliminary reviews, the Exchange reinstated the members without completing trade practice investigations. However, the members' responses to the Exchange during the course of the preliminary reviews indicated that rule violations may have occurred. Given the facts and circumstances of these matters, the Division believes that the Exchange should have elevated its preliminary reviews to investigations.
 - **Deficiency: Rather than closing a matter and reinstating a suspended member after a preliminary review, Nadex must conduct an investigation upon receipt of information indicating that a violation may have occurred. Nadex must also create an investigation report in accordance with Commission regulations 38.158(c) and 38.158(d).**
3. Investigations and investigation reports (Core Principle 2, Commission regulation 38.158)
- The Exchange closed 268 Almas alerts relating to its two market makers, without opening investigations into potential violations of Exchange rules.
 - Exchange Rule 4.4(a) (Obligations of Market Makers) provides that “[t]ransactions of Market Makers should constitute a course of dealings reasonably calculated to contribute to the maintenance of a fair and orderly market, and Market Makers shall not make bids or offers or enter into transactions that are inconsistent with such a course of dealings.” However, on 268 occasions during the target period, the market makers

quoted prices that resulted in trades that were not priced consistently with the underlying market at the time of the trades.

- Exchange Rule 4.4(a) also requires market makers to “maintain two-sided displayed quotes” and “comply with all other terms of the applicable Market Maker Agreement.” However, on 137 out of the 268 occasions discussed above, the market makers failed to maintain both sides of the market.
- After conducting preliminary reviews of the 268 alerts relating to market makers, the Exchange closed the alerts without further investigation. The closing narratives for the alerts did not provide sufficient detail for the Division to understand why the Exchange closed the alerts without further investigation. Thus, the Division is concerned that the Exchange did not adequately address potential Exchange Rule 4.4 violations.
 - **Deficiency: Pursuant to Commission regulation 38.158, the Exchange must conduct investigations upon the discovery or receipt of information that indicates a reasonable basis for finding that a violation by a market maker may have occurred. If, after conducting a preliminary review, the Exchange determines that an alert regarding a market maker does not warrant an investigation, the Exchange must include sufficient detail in the closing narrative to explain why the alert was closed.**

4. Availability of General Information (Core Principle 7, Commission regulation 38.401)

- Commission regulation 38.401(a)(1) provides that a DCM “must have procedures, arrangements and resources for disclosing to the Commission, market participants and the public accurate information pertaining to: (i) Contract terms and conditions; (ii) Rules and regulations pertaining to the trading mechanisms; and (iii) Rules and specifications pertaining to operation of the electronic matching platform or trade execution facility.” A DCM must place such information on its website pursuant to Commission regulation 38.401(a)(3).
- The Exchange’s market maker program constitutes a “rule” subject to the public disclosure requirements of Commission regulation 38.401(a).⁹

⁹ The Commission has stated its view that a market maker program is an “agreement” corresponding to a “trading protocol” as such terms are used in the definition of “rule” under Commission regulation 40.1(i). See Final Rule, Provisions Common to Registered Entities, 76 FR 44776, 44778 (July 27, 2011), where the Commission stated that “[a] DCM’s rules implementing market maker and trading incentive programs fall within the Commission’s oversight authority.”

- The Division notes that the Exchange has posted a form of Market Maker Agreement on its website,¹⁰ but the Exchange has not posted the specific agreements to which its two market makers are parties. Those agreements permit the market makers to withdraw from a market between one and five minutes before the expiration of a given contract, depending on the type of contract.
- Given that market makers are on one side of approximately 99 percent of all trades, the withdrawal of a market maker could effectively eliminate the liquidity that otherwise appears to be present in a contract.
- After the target period, on June 16, 2017, Nadex filed a certification revising the form of Market Maker Agreement publicly available on the Exchange's website. The revisions provide that a market maker is permitted to withdraw from a market during (a) the 5 minute period just prior to expiry of any event contract; (b) the 2 minute period just prior to expiry of any intraday, daily, or weekly contract, with the exception of intraday 5-minute and 20-minute contracts; and (c) the 1 minute period just prior to the expiry of any intraday 5-minute or 20-minute contract. The revisions were effective as of July 3, 2017. They address the Division's concerns during the target period regarding the availability of information regarding the material terms of the Market Maker Agreements.
 - **Deficiency: During the target period, Nadex did not make the material terms of the Market Maker Agreements with its two market makers readily available on the Exchange's website, in accordance with Commission regulation 38.401. The Exchange has since cured this deficiency pursuant to the rule filing described above.**

Additional details regarding the facts and analysis relevant to the Division's review are contained in the Compliance Matrix in Appendix A.

¹⁰ See Market Maker Agreement, available at www.nadex.com/sites/default/files/pdf/nadex-market-maker-agreement.pdf.

III. Nadex Operations

A. Nadex Governance

Ownership and Board of Directors

IG Group Holdings PLC (“IG Group”), a UK-based company, is the ultimate parent company of Nadex. The IG Group was established in 1974 as a “spread betting firm” and now offers online trading services in numerous countries.¹¹

The Exchange’s Board of Directors (“Board”) is composed of five directors. Three directors are affiliated with IG Group: the CEO of Nadex and two representatives of IG Group, one of whom is a chief analytics officer and the other a chief information officer of IG Group. The Exchange’s Board also includes two public directors.¹² Nadex’s sole shareholder, IG US Holdings Inc., a wholly-owned subsidiary of IG Group, has the authority to select and remove Board members, including public directors.

Regulatory Oversight Committee

The ROC oversees the Exchange’s self-regulatory program. The ROC’s responsibilities, as listed in its charter, are to: (i) “oversee all facets of Nadex’s regulatory program, including trade practice and market surveillance; audits, examinations, and other regulatory responsibilities; and the conduct of investigations;” (ii) “review the size and allocation of the regulatory budget and resources; and the number hiring and termination, and compensation of regulatory personnel;” (iii) “oversee Nadex’s chief regulatory officer, who will report directly to the ROC;” and (iv) “prepare an annual report assessing Nadex’s self-regulatory program for the Board and the Commission.” The ROC Charter also provides that the ROC shall (i) “meet

¹¹ See IG Group, “What we do,” available at www.iggroup.com/about-ig-group/what-we-do.

¹² The Exchange provided the Division with Board certifications stating that the Exchange’s public directors meet the definition of “public director” contained in the Commission’s regulations.

quarterly and keep minutes of its meetings;” (ii) “recommend changes that would ensure fair, vigorous, and effective regulation;” and (iii) “[r]eview significant regulatory proposals and advise the Board as to whether and how such changes impact regulation.”

The Exchange’s ROC charter requires a minimum membership of two individuals, both of whom must be public directors. Currently, the ROC is composed of the two Nadex Board members who have self-certified themselves as public directors and have served in this capacity since 2010. One of the ROC members serves as Chairman and has the final decision in the event of a tie vote. The ROC alternates on an annual basis which of its members serves as Chairman.

The ROC holds meetings quarterly. During meetings, the CRO and other regulatory personnel present information relating to investigations, regulatory developments, and Exchange operations. Between the quarterly meetings, the CRO communicates with the ROC regarding regulatory and other matters material to the Exchange’s business.

B. Current Products

Nadex offers two types of products: binary options and spreads. Binary options, which accounted for 92.2 percent of Exchange trading during the target period, allow members to take risks based on the occurrence or non-occurrence of an event or condition.¹³ At expiration, each binary option settles at zero (if the event does not occur) or 100 (if the event occurs). Prior to expiration, the price of the option will fluctuate based on the market’s perspective on the likelihood of the occurrence. Members who seek to profit from the event’s occurrence can buy the binary option at the prevailing offer price (which will range from zero to 100). Conversely, members who seek to profit from the event’s non-occurrence can sell the option at the prevailing bid price. Sellers’ and buyers’ potential losses are known at the time of purchase or sale. A

¹³ See Section IV below for detailed product volume information.

buyer's profit is limited to the difference between the purchase price and 100, while a buyer's loss is limited to the difference between the purchase price and zero. A seller's profit is limited to the difference between the purchase price and zero; a seller's loss is limited to the difference between the purchase price and 100.¹⁴

Nadex offers binary options based on prices and events. Price-based binary options set forth a yes/no proposition on stock index futures prices, forex rates, and commodity futures prices.¹⁵ The values of these options are based on whether the price of products, typically offered by other exchanges, is above or below a certain price at a certain time. For example, Nadex's crude oil binary option contract is based on the price of NYMEX crude oil futures. A corresponding binary option on Nadex may offer, for example, a chance to bid on whether the price of crude oil futures will be above \$48.50 per barrel at 2:30 p.m. on a certain date. Event-based binary options allow Nadex members to take risks on the value of the fed funds rate set by the Federal Open Market Committee, jobless claims figures released by the Department of Labor, and nonfarm payroll statistics released by the Bureau of Labor Statistics.

Like binary options, Nadex's spread products allow members to take risks based on the price of an underlying instrument ("spot rate"). Stock index futures prices, forex rates, and commodity futures can serve as the spot rate. In contrast to binary options, spreads are expressed in ranges. As with binary options, the maximum potential gains and losses of buyers and sellers are known at the time of sale because Nadex's spreads settle at rates referenced to the level of the

¹⁴ See Nadex, "The Risk and Reward Profile of Binary Options," available at www.nadex.com/learning-center/courses/binary-options/risk-and-reward-profile-binary-options.

¹⁵ During the target period, Nadex also offered binary options based on the TeraBit Bitcoin price index. The Exchange delisted its Bitcoin binary option product after the target period, on December 16, 2016.

spot rate. For example, the spread contract euro / U.S. dollar (“EUR/USD”) 1.1000-1.1250 (3pm) would settle at:

- the spot rate, if the spot rate is within the 1.1000-1.1250 range at 3 p.m.;
- 1.1000, if the spot rate is below 1.1000; or
- 1.1250, if the spot rate is above 1.1250.

During the target period, Nadex introduced contracts with shorter durations than those previously offered by the Exchange. These shorter duration products include 20-minute contracts on U.S. equity index products, as well as five-minute contracts on forex products.

The Exchange has at times halted trading in a product, generally as a result of technology issues that prevent the Exchange from receiving data from the underlying market for the product. During the target period, the Exchange halted trading once, on August 24, 2015, as a result of a halt in underlying equity index products.¹⁶

C. Market Makers

Nadex had Market Maker Agreements with two entities during the target period, Market Risk Management (“MRM”) and Group One Futures Trading LLC (“Group One”). MRM is an Exchange affiliate. Market makers provided a significant source of liquidity to the Exchange by taking one side of almost every trade during the target period. MRM was on one side of approximately 70 percent of trades, while Group One was on one side of approximately 29 percent. Taken together, the two market makers were on one side of approximately 99 percent of all trades during the target period.

¹⁶ The Exchange also described to the Division three trading halts that took place after the target period, involving the TeraBit, FTSE, and Nikkei 225 underlying markets.

Nadex market makers are not required to quote bids and offers for a contract for a specified period of time before the expiration of the contract.¹⁷ Further, Appendix A of Nadex's Market Maker Agreement permits market makers to withdraw from a market between one and five minutes before the expiration of a given contract.

IV. Trading Volume During the Target Period

Total trading volume at Nadex during the target period was 5,713,929 contracts. 5,269,006 (92.2 percent) of the contracts were binary options and 444,923 (7.8 percent) of the contracts were spreads. The total trading volume for the year preceding the target period (*i.e.*, December 12, 2013 to December 11, 2014) was 3,622,779 contracts.¹⁸

The five products with the highest trading volume during the target period were EUR-USD, US 500, USD-JPY, AUD-USD, and GBP-USD. The volume for these contracts is summarized in Table 1 below:

Table 1. Volume for five most traded products

Product	Total Volume (in contracts)	Binary Option Volume	Spread Volume
EUR-USD	923,611	873,482	50,129
US 500	895,802	824,468	71,334
USD-JPY	623,924	597,833	26,091
AUD-USD	514,336	471,590	42,746
GBP-USD	487,094	470,359	16,735

¹⁷ See section 3(c) of Nadex's Market Maker Agreement.

¹⁸ The Exchange had total trading volume of 987,153 contracts during the target period for the Division's previous Rule Enforcement Review for Nadex, which covered the period from June 15, 2011 through June 15, 2012. See Rule Enforcement Review of Nadex, dated November 15, 2013, available at www.cftc.gov/ido/groups/public/@iodcms/documents/file/remadex11152013.pdf.

Table 2 below lists the five contracts among the Exchange's products with the highest monthly open interest during the target period:

Table 2. Contracts with highest monthly open interest

Product	Average Monthly Open Interest Total	Average Monthly Open Interest Weekly Expiration	Average Monthly Open Interest Daily Expiration
US 500	491	491	0
GBP-USD	164	14	149
EUR-USD	114	57	58
GBP-JPY	70	2	68
Crude Oil	65	65	0

**Appendix A
Compliance Matrix**

CFTC Regulation	Findings Regarding Exchange's Compliance	Deficiencies and Recommendations
Core Principle 2 – Compliance with Rules		
§ 38.150 Core Principle 2	The Exchange's Rulebook sets forth access requirements, terms and conditions of contracts to be traded on the Exchange, and rules prohibiting abusive trading practices on the Exchange.	No deficiencies or recommendations.
§ 38.152 Abusive trading practices prohibited	Chapter 5 of the Rulebook prohibits the trade practice violations enumerated in Commission regulation 38.152. <u>See</u> Nadex Rule 5.19 (Prohibited Transactions and Activities); Nadex Rule 5.7 (Handling of Customer Orders). ¹⁹	No deficiencies or recommendations.
§ 38.155 Compliance staff and resources	<p>The regulatory personnel at the Exchange consist of the Regulatory Officer, Compliance Associate, CRO, and Legal Counsel. The Regulatory Officer and Compliance Associate together comprise the Exchange's Compliance Department, which reports to the CRO.</p> <p><u>Regulatory Personnel Responsibilities</u></p> <p>The Exchange described the responsibilities of its regulatory personnel as follows:</p> <ul style="list-style-type: none"> • CRO <ul style="list-style-type: none"> ○ Responsibilities: The CRO is responsible for handling the day-to-day regulatory functions of the Exchange. The CRO oversees trade practice surveillance, market oversight, and investigations that the other regulatory personnel conduct. The CRO also reviews monthly statistics regarding trade 	See recommendations below.

¹⁹ The Exchange revised Exchange Rules 5.7 and 5.19 after the target period. See supra note 5.

<p>§ 38.155 Compliance staff and resources (<i>continued</i>)</p>	<p>practice alerts. At the conclusion of an investigation, the CRO reviews and signs off on an investigation memorandum, and authorizes any action that the Exchange has determined to take against the subject of the investigation. The CRO reports to the ROC.</p> <ul style="list-style-type: none"> • Regulatory Officer <ul style="list-style-type: none"> ○ Responsibilities: The Regulatory Officer is responsible for conducting market surveillance on a day-to-day basis. The Regulatory Officer generally reviews and closes all Almas alerts generated by the SMARTS system by the end of the day on which the alerts were generated. For alerts generated at night, the Regulatory Officer generally reviews and closes the alerts the following business day. The Regulatory Officer also drafts closing narratives for alerts closed after a preliminary review. When a matter is elevated from a preliminary review to an investigation, the Regulatory Officer conducts the investigation in consultation with the other regulatory personnel, and reviews the draft investigation memorandum that the Legal Counsel prepares. The Regulatory Officer is also responsible for providing one-on-one training to new Compliance Department employees, as discussed below. The Regulatory Officer reports to the CRO. • Compliance Associate²⁰ <ul style="list-style-type: none"> ○ Responsibilities: The Compliance Associate is responsible for monitoring membership applications for responses 	
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²⁰ The Exchange experienced a personnel change in the Compliance Associate position during the target period. The current Compliance Associate (as of the date of this report) started in that role as of October 5, 2015, after the prior Compliance Associate left the Exchange.

<p>§ 38.155 Compliance staff and resources (<i>continued</i>)</p>	<p>concerning criminal background history, and monitoring the MIS system²¹ for potential alerts on applicants. In addition, the Compliance Associate reviews marketing materials, provides monthly activity statements to members upon request, and works with the customer service and account opening teams on issues relating to Exchange members. The Compliance Associate is trained to act as a backup for the Regulatory Officer. The Compliance Associate reports to the CRO.</p> <ul style="list-style-type: none"> ○ The Exchange represented to the Division that the Regulatory Officer and the Compliance Associate both work on trade practice surveillance matters. However, the documentation the Division received from the Exchange indicates that the Regulatory Officer conducted substantially all trade practice surveillance during the target period, including the review and closure of Almas alerts in the SMARTS system. ● Legal Counsel <ul style="list-style-type: none"> ○ Responsibilities: The Legal Counsel works with the Compliance Department on investigations, including drafting investigation memoranda for CRO approval. The Legal Counsel also serves as the Exchange’s corporate secretary and handles a variety of legal matters, including rule filings the Exchange submits to the Commission. The Legal Counsel reports to the CEO of the Exchange. <p>At the start of the target period, one individual held the titles of CRO and general counsel of the Exchange. After he stepped down from those</p>	
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²¹ The Exchange utilizes the third-party “McDonald Information Services” (“MIS”) as a background screening service.

<p>§ 38.155 Compliance staff and resources (continued)</p>	<p>positions as of March 20, 2015, two Exchange staff members took over as CRO and Legal Counsel, respectively, as of March 23, 2015. The CRO who started on March 23, 2015 also served in a dual capacity as the CCO of the Nadex DCO.²² The Exchange represented that the combined CRO / CCO reported (a) to the ROC, in his capacity as CRO of the DCM, and (b) to the CEO of Nadex, in his capacity as CCO of the DCO.²³</p> <p><u>Training</u></p> <p>The Regulatory Officer provides one-on-one training to new Compliance Department staff, including training on the functionality and review process of the SMARTS system and alerts. In particular, the Regulatory Officer trains the Compliance Associate to act as back-up in the event that the Regulatory Officer is out of the office. In addition, the Exchange participates in external trainings and seminars through the FIA Law and Compliance Division.</p> <p>The documentation the Division received from the Exchange indicates that the one-on-one training sessions with the Regulatory Officer include material that is not set forth in the Exchange’s Compliance Manual. Given that a single Regulatory Officer is primarily responsible for providing training regarding trade practice surveillance, the Division recommends that the Exchange include in its Compliance Manual the material covered in such training sessions.</p>	<p><u>Recommendation</u></p> <p>Nadex should revise its Compliance Manual to incorporate the material covered in one-on-one training sessions with the Regulatory Officer.</p>
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²² Nadex is registered with the Commission as both a DCM and a DCO. Nadex represented to the Division that its DCM and DCO share a common staff.

²³ After the target period, on or about August 3, 2016, the combined CRO / CCO who started in March 2015 left the Exchange. Approximately eight weeks later, on September 26, 2016, the Exchange appointed a new CRO / CCO. The Exchange’s Legal Counsel served as interim CRO / CCO between August 3 and September 26, 2016.

<p>§ 38.155 Compliance staff and resources (<i>continued</i>)</p>	<p><u>Sufficiency of Compliance Staff and Resources</u></p> <p>The Division notes that the Exchange’s regulatory personnel (other than the Regulatory Officer) have a variety of duties at the Exchange unrelated to trade practice surveillance. For example, the CRO also serves as the CCO of the Nadex DCO, and the Legal Counsel serves as the Exchange’s corporate secretary and handles both compliance and non-compliance related matters.</p> <p>The documentation that the Division received from the Exchange indicates that one member of the Compliance Department – <i>i.e.</i>, the Regulatory Officer – conducted substantially all trade practice surveillance during the target period.</p> <p>The Exchange’s trading volume has increased substantially in recent years, including a nearly six-fold increase from the 2011-2012 target period of the Division’s prior Nadex Rule Enforcement Review to the target period for this Rule Enforcement Review, without an increase in Compliance Department staff.</p> <p>The Exchange’s SMARTS system generated 8,677 automated Almas alerts during the target period. Of those alerts, the Exchange conducted only one formal investigation into a potential trade practice violation.</p> <p>The Division is concerned that the Exchange may have insufficient staff dedicated to adequately investigate potential trade practice violations identified in the alerts, especially because the Exchange closed certain Almas alerts without investigating potential trade practice violations, where such investigations appear to have been warranted.²⁴</p>	
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²⁴ See the discussion below under Commission regulation 38.158 regarding matters that were closed after preliminary reviews, where the Division believes trade practice investigations may have been warranted under the circumstances.

<p>§ 38.155 Compliance staff and resources (<i>continued</i>)</p>	<p>The lack of trade practice investigations could also suggest that Nadex’s trade practice surveillance program is not detecting violations occurring on the Exchange. For example, the Exchange stated that it did not regularly conduct trade practice surveillance during the target period to detect potential spoofing. The Division is concerned that the Exchange may have insufficient staffing levels to conduct surveillance regarding potential spoofing.²⁵</p>	<p><u>Recommendation</u></p> <p>Nadex should consider whether its staff and resources are sufficient or properly allocated to detect and investigate potential trade practice violations. To that end, the Exchange should:</p> <ul style="list-style-type: none"> ○ Perform an evaluation to determine if Nadex’s current staffing levels or allocation of staffing levels allow it to adequately investigate potential trade practice violations (especially given that the Exchange closed certain Almas alerts without investigating potential trade practice violations, where such investigations appear to have been warranted). ○ Perform an evaluation to determine if Nadex’s trade practice surveillance program is detecting all types of trade practice violations that can occur on the Exchange, including violations that may currently go
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²⁵ See the discussion below under Commission regulation 38.153 regarding spoofing.

<p>§ 38.155 Compliance staff and resources (<i>continued</i>)</p>		<p>undetected or that may be unique to a non-intermediated exchange, and whether Nadex’s current staffing levels or allocation of staffing levels allow it to perform such detection.</p> <p>The Exchange should provide the Division with a copy of its evaluation and any changes the Exchange plans to make based on the evaluation’s findings.</p>
<p>§ 38.156 Automated trade surveillance system</p>	<p>The Exchange uses the SMARTS system to detect and analyze possible market abuse. SMARTS provides a graphical view of trading in a specific market at a specific time. For order, trade, and clearing information, SMARTS provides compilation, retrieval, sorting, filtering, and analysis functionality. The SMARTS system is comprised of the following surveillance tools:</p> <ul style="list-style-type: none"> • The Almas alerting tool generates automated real-time alerts, tracks an audit history of information recorded against each alert and logs who was responsible for each action. • ARC contains a group of report templates with ad hoc customizable parameters and filter rules for each report. • The replay tool is used to build and replay the order book for any contract. It is used to review suspicious activity and recreate every bid and offer that entered the market at a given time. • Spread is a trading visualization tool that presents graphically the time series of trading data for a contract. The graph contains trade details and has the ability to overlay underlying market 	<p>No deficiencies or recommendations.</p>

<p>§ 38.156 Automated trade surveillance system (<i>continued</i>)</p>	<p>pricing.</p> <p>The Exchange runs the following Almas alerts on a real-time basis: Pre-Arranged, Money Passing, Settlement Manipulation, Futures Price Divergence, Position Limit Monitoring, Wash, Trading Ahead of Customer Orders, and Trading Against Customer Orders.²⁶ Four types of Almas alerts were triggered during the target period, namely Pre-Arranged Trading, Money Passing, Settlement Price Manipulation, and Futures Price Divergence. The Exchange reviews Almas alerts on a daily basis, and usually closes alerts by the end of the day on which they were generated.</p> <p>With respect to ARC, the Exchange is able to run reports for Pre-Arranged Trading, Collusion, Order History, Deleted Orders, Trade Report (Fast) (showing all trades that meet user defined filter criteria), Time Period (showing when a given trader is active), Counterparties (showing counterparties for a given trader), Products (showing which products an Exchange member trades), CTI, and P&L. During the target period, the Compliance Department ran ARC reports on a monthly basis for Trade Report (Fast), Pre-Arranged Trading, and Collusion. The Exchange ran the Order History and Deleted Orders reports on an as-needed, ad hoc basis.</p> <p>The Exchange also accesses programs outside of the SMARTS system in connection with trade practice surveillance. The Nadex Dashboard is an internally created platform of searchable database information, which the Exchange uses to view historical trading and review exchange volume statistics on an ad hoc basis. The Nadex Admin Manager is a searchable database of Exchange back office functions, which is used to</p>	
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²⁶ The Exchange represented that it continued to run the Almas alerts for Trading Ahead of Customer Orders and Trading Against Customer Orders during the target period, although the Exchange did not have any FCM members during that time.

<p>§ 38.156 Automated trade surveillance system (continued)</p>	<p>view members' application details, historical ledger items, and current ledger balances of members on an ad hoc basis.</p>	
<p>§ 38.157 Real-time market monitoring</p>	<p><u>Real-Time Market Monitoring</u></p> <p>The Exchange's Compliance Department is responsible for real-time market monitoring. The monitoring is primarily conducted by the Regulatory Officer using the SMARTS system. When an Almas alert is generated, the Regulatory Officer opens the alert and writes a summary in the SMARTS system based on his review of the alert and the circumstances surrounding the alert. The Regulatory Officer marks an alert as "E" for "explained" where it appears that no rule violation occurred. The Regulatory Officer marks certain documents "D" for "discard," such as regularly generated reports that appear in Almas but should not be categorized as alerts. If the Regulatory Officer determines, after a preliminary review of an alert, that further investigation is warranted, he marks the alert "I" for "investigate." However, marking an alert "I" does not automatically lead the Compliance Department to open a formal investigation into the alert. Instead, the Regulatory Officer conducts further review into the alert to determine if it merits an investigation.</p> <p>When reviewing an Almas alert, the Regulatory Officer may use the "replay" function in the SMARTS system to replay the order book for a contract on a second-by-second basis. The Regulatory Officer also uses the "spread" function, which provides a graph of bid/ask spreads in the market, and dots wherever a trade occurred. The Regulatory Officer also runs ARC reports, which have customizable features not found in Almas. For example, the Regulatory Officer can adjust the parameters of a Pre-Arranged Trading report in ARC, whereas the corresponding Pre-Arranged Trading alert in Almas is hard-coded with parameters that</p>	<p>No deficiencies or recommendations.</p>

<p>§ 38.157 Real-time market monitoring (continued)</p>	<p>the Regulatory Officer cannot modify on his own.²⁷</p> <p><u>Emergency Suspensions or Terminations</u></p> <p>Exchange Rule 9.6(a) (Summary Suspension) provides that the Exchange “may summarily suspend or restrict a Member (or any of its Authorized Traders or, in the case of FCM Members, its customers) privileges [sic] if the Chief Regulatory Officer believes suspension or restriction is necessary to protect the swaps or commodity futures markets, Nadex, the public, or other Members.” The Exchange represented that it did not issue any emergency suspensions or terminations during the target period.</p> <p><u>Trade adjustment and cancellation</u></p> <p>During the target period, Nadex Rule 5.14 provided that the Exchange, in its discretion, may cancel a trade in a spread contract that has been executed on the market at a price that is inconsistent with prevailing market conditions due to improper or erroneous orders or quotes being matched on the Market (“Erroneous Trade”). However, the Rulebook was silent regarding whether binary option trades may be cancelled. After the target period, the Exchange revised Exchange Rule 5.14(a) to provide that, with respect to binary option contracts, Nadex will generally not cancel or adjust an Erroneous Trade except in extraordinary circumstances as determined by the Exchange.²⁸</p>	
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²⁷ The Exchange stated that in order to change the hard-coded parameters in an Almas alert, the Regulatory Officer and CRO would have to present the proposed modification to the ROC for approval.

²⁸ The Exchange revised section (a) of Exchange Rule 5.14 after the target period. See supra note 6.

<p>§ 38.153 Capacity to detect and investigate rule violations</p>	<p><u>Detecting Rule Violations</u></p> <p>The Exchange’s trade practice surveillance program is divided between pre-case matters (preliminary reviews) and cases (investigations). The Exchange maintains logs that track pre-case matters and cases.</p> <p>The sanctions that the Exchange can impose include warning letters, fines, and suspension or termination of a member’s account. The Exchange’s Rulebook allows for warning letters to be issued for substantive trade practice violations, although the Exchange did not issue any warning letters during the target period.</p> <p><u>Collecting Information and Documents</u></p> <p>Pursuant to Exchange Rule 3.3(a) (Member Obligations), each Exchange member and any authorized trader thereof must cooperate with the Exchange, its agents, and/or the Commission in any investigation, call for information, inquiry, audit, examination, or proceeding. Exchange Rule 3.3(a) further provides that such cooperation must include providing the Exchange with access to information on the activities of such member and/or authorized trader in any referenced market that provides the underlying prices for any Nadex market.</p>	
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<p>§ 38.153 Capacity to detect and investigate rule violations (continued)</p>	<p style="text-align: center;"><u>Pre-Case</u></p> <p style="text-align: center;">Trade Practice Reviews</p> <p><u>Trade Practice Review Procedures</u></p> <p>The Exchange refers to pre-investigation matters as preliminary reviews. A preliminary review may be initiated if:</p> <ul style="list-style-type: none"> • The Compliance Department detects unusual activity (<i>e.g.</i>, based on alerts generated by the SMARTS system or MIS);²⁹ • Any Nadex employee detects unusual or suspicious activity in the course of his or her job; • A market participant submits a tip or complaint; or • A regulatory agency refers unusual activity to the Exchange. <p><u>Capacity to Detect Spoofing</u></p> <p>Section 4c(a)(5)(C) of the CEA prohibits spoofing, as do Nadex’s rules. Nadex represented that it has the ability to use deleted order reports in ARC to detect spoofing by Exchange members. However, the Exchange explained that it reviewed ARC reports for spoofing only on an infrequent, ad hoc basis during the target period. It asserted that it would be impracticable for any Nadex member to engage in spoofing, given that members enter trades manually on the Exchange platform.</p> <p>The Division believes that Nadex did not adequately support this</p>	<p>See recommendation below.</p>
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²⁹ The Exchange screens members on an ongoing basis using MIS, the third-party background screening service. MIS screens members on an ongoing basis for criminal charges or fines by financial regulators.

<p>§ 38.153 Capacity to detect and investigate rule violations (continued)</p>	<p>assertion, and that the Exchange’s policy during the target period of infrequent monitoring could potentially have resulted in undetected spoofing.³⁰</p> <p>After the target period, on June 13, 2017, Nadex acknowledged to the Division that spoofing can in fact occur on its markets, and informed the Division that the Exchange had opened two investigations relating to potential spoofing in January 2017. Nadex represented that it has begun reviewing a manual report on a daily basis to detect potential spoofing, and that it is also working on an automated SMARTS alert for spoofing.</p> <p><u>Disposition of Trade Practice Reviews</u></p> <p>Nadex documents the preliminary reviews arising from SMARTS alerts in the Almas section of SMARTS.</p> <p>When the Compliance Department closes an Almas alert as “explained,” the Exchange does not create any documentation regarding the closure of the alert beyond the closing narrative and other information contained in the SMARTS system. The Exchange considers the review and closure of Almas alerts to constitute a preliminary review.</p> <p>The SMARTS system generated a total of 8,677 Almas alerts during the target period. The number of alerts, broken down by category, is as follows:</p>	<p><u>Recommendation</u></p> <p>Nadex should promptly complete its development of a surveillance program to detect spoofing on its markets. Nadex should provide the Division with a written description of the Exchange’s spoofing detection program once it has completed its development of such program.</p>
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³⁰ See *supra* note 7.

<p>§ 38.153 Capacity to detect and investigate rule violations (continued)</p>	<ul style="list-style-type: none"> • Pre-Arranged Trading Alert: 4,322 • Money Passing Alert: 979 • Settlement Price Manipulation: 371 • Futures Price Divergence: 3,005 <p>The Division reviewed a representative sampling of the alerts, broken down as follows:</p> <ul style="list-style-type: none"> • Pre-Arranged Trading Alert – 1,162 of 4,322 (27 percent) • Money Passing Alert – 264 of 979 (27 percent) • Settlement Price Manipulation– 224 of 371 (60 percent) • Futures Price Divergence– 2,208 of 3,005 (73 percent) <p>The dispositions of the Almas alerts were as follows:</p> <p>Pre-Arranged Trading: 4,300 alerts were closed as “Explained,” 16 were discarded, and six were designated for possible investigation.</p> <p>Money Passing: 869 alerts were closed as “Explained,” 106 were discarded, and four were designated for possible investigation.</p> <p>Settlement Price Manipulation: 362 alerts were closed as “Explained,” nine were discarded, and none was designated for possible investigation.</p> <p>Futures Price Divergence: 1,287 alerts were closed as “Explained,” 1,712 were discarded, and six were designated for possible investigation.</p>	
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<p>§ 38.153 Capacity to detect and investigate rule violations (continued)</p>	<p style="text-align: center;">Complaints</p> <p><u>Complaint Procedures</u></p> <p>Complaints can originate from Exchange members or non-members, and may be made against the Exchange, its members or third parties. Complaints may be submitted to the Exchange by emailing the Compliance Department directly, or by contacting the Exchange’s customer service group.</p> <p>The Compliance Department completes a Complaint Report Form upon receipt of a complaint, documenting the allegations made. The Compliance Department reviews the evidence involved to determine the legitimacy of the allegations.</p> <p>If it is determined that a complaint has merit, the Compliance Department will investigate the matter based on the circumstances of the complaint.</p> <p><u>Complaint Opened and Closed During Target Period</u></p> <p>The one complaint Nadex received during the target period involved a corn contract being closed before its usual expiration time on the Friday a week after Thanksgiving. Nadex operations staff inadvertently failed to reset the regular closing time from the earlier close of the Thanksgiving holiday schedule the prior week. The complainant asserted that if the contract had expired at its usual time, he would be entitled to the full contract payout. The Exchange agreed to make an adjustment to the complainant’s account reflecting the amount he paid in fees relating to the contract.</p>	<p>No deficiencies or recommendations.</p>
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<p>§ 38.153 Capacity to detect and investigate rule violations (continued)</p>	<p><u>Timeliness of Complaint</u></p> <p>The Exchange closed the complaint submitted during the target period in one day.</p> <p><u>Conduct of Complaint</u></p> <p>No specific rules were suspected to have been violated in the complaint filed during the target period, and the contract posting in question did, in fact, list the earlier expiration time. The Division found that the Exchange investigated the complaint in a timely and thorough manner.</p>	
<p>§ 38.158 Investigations and investigation reports</p>	<p><u>Investigation Procedures</u></p> <p>The Compliance Department (<i>i.e.</i>, the Regulatory Officer and Compliance Associate) will open an investigation if it reasonably believes, based on a preliminary review, that Exchange rules have been violated. The Compliance Department conducts investigations in consultation with the Legal Counsel and CRO. For investigations relating to trade practice, the Compliance Department may send out questionnaires to the Exchange members involved. Once Compliance Department staff has collected sufficient evidence in connection with its investigation, it relays that information (including disciplinary recommendations) to the Legal Counsel, who drafts an Investigative Report. The Compliance Department reviews the Investigative Report for accuracy, and then sends the report to the CRO for approval.</p> <p>Once a matter is elevated from a preliminary review to an investigation, Nadex maintains all documentation relating to the investigation in a shared Compliance drive on the Exchange’s network.</p>	<p>See deficiencies below.</p>

<p>§ 38.158 Investigations and investigation reports (continued)</p>	<p><u>Conduct of Investigations</u></p> <p>The Division reviewed all documentation that the Exchange provided for the 16 Almas alerts generated during the target period that the Regulatory Officer marked “I” for further review. Of those 16 alerts, two alerts led to one trade practice investigation, while the Exchange closed the other 14 alerts after preliminary reviews. The following is a summary of the disposition of these alerts.</p> <p><u>Investigation Based on Alerts Marked “I”</u></p> <p>On October 30, 2015, the Exchange received one Pre-arranged Trading alert and one Futures Price Divergence alert relating to the activity of two Canadian members of the Exchange. The members admitted to prearranging trades in which one member mentored the other (who was his nephew) on trading. The Exchange subsequently ceased doing business with all Canadian citizens, as a result of a cease and desist order from the Ontario Securities Commission stating that the Exchange was operating without proper registration. The Exchange closed the matter on February 11, 2016 (after the target period), with the proviso that it be reopened if the Exchange resumes business in Canada or either member relocates to a jurisdiction from which the Exchange accepts registrations.</p> <p><u>Alerts Marked “I” with No Investigation</u></p> <p>With respect to the 14 Almas alerts that the Exchange marked “I” but did not formally investigate, 11 of the alerts involved matters in which the Exchange suspended members and subsequently terminated their accounts for inactivity, after the members failed to respond to requests for information. These matters are summarized below:</p> <ul style="list-style-type: none"> • On May 11, 2015, the Exchange received three Pre-Arranged 	
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<p>§ 38.158 Investigations and investigation reports <i>(continued)</i></p>	<p>Trading alerts and two Futures Price Divergence alerts relating to the trading activity of two members. Both members listed the same address in New York. The Compliance Department placed holds on the members' accounts. On May 18, 2015, the Exchange sent an email asking the members to respond to investigative questions. The members responded the next day with an email denying any wrongdoing. One of the members sent a subsequent email stating that a member of his immediate family had accessed his account. The Exchange never received any further replies from the members. On November 16, 2016 (after the target period), the Exchange terminated the members for inactivity pursuant to Exchange Rule 3.3(f).</p> <ul style="list-style-type: none"> • On June 4, 2015, the Exchange received three Money Passing alerts and three Futures Price Divergence alerts relating to the trading activity of three members. The Exchange sent the members an email, informing them that their accounts were placed on hold for suspicious trading activity and asking them to respond to investigative questions. Two of the members never responded, while the third sent multiple emails but never fully answered the Exchange's questions. On November 16, 2016 (after the target period), the Exchange terminated the members for inactivity pursuant to Exchange Rule 3.3(f). <p>The Division is concerned that Nadex did not further investigate these matters after conducting preliminary reviews based on Pre-Arranged, Money Passing, and Futures Price Divergence Almas alerts. Specifically, by terminating members for inactivity rather than conducting a thorough investigation, Nadex did not conduct substantive trade practice investigations when warranted. Further, terminated members could reapply for Exchange membership years later and there would be an unresolved matter that is now too late to fully investigate.</p>	<p><u>Deficiency</u></p> <p>Pursuant to Commission regulation 38.158, the Exchange must conduct investigations upon the discovery or receipt of information that indicates a reasonable basis for finding that a violation may have occurred. After conducting an investigation, the</p>
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<p>§ 38.158 Investigations and investigation reports (continued)</p>	<p>In the three remaining Almas alerts that the Exchange marked “I” without conducting an investigation, the Exchange suspended members’ accounts and then reinstated the members after they responded to requests for information. These matters are summarized below:</p> <ul style="list-style-type: none"> • On February 9, 2015, the Exchange received a Pre-Arranged Trading alert relating to the trading activity of two members. The Compliance Department sent the members an email the following day, asking them to respond to investigative questions. In their responses, the members (who were spouses) indicated that they pre-arranged trades and that the husband had logged into his wife’s account. Further, the members appear to have provided misleading information to the Exchange, since the wife denied that anyone else had logged into or traded for her account, while the husband admitted to entering orders for his wife’s account. The Exchange closed the wife’s account and reinstated the husband’s account, after the husband agreed that he would not allow anyone else to access, trade, inquire about or make deposits to his account. • On July 25, 2015, the Exchange received two Pre-Arranged Trading alerts relating to the trading activity of two members. The Compliance Department placed holds on both members and sent them an email asking them to respond to investigative 	<p>Exchange must create an investigation report in accordance with Commission regulations 38.158(c) and 38.158(d).</p>
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<p>§ 38.158 Investigations and investigation reports (continued)</p>	<p>questions. In their responses to the Exchange, the members stated that they had placed trades opposite each other as an experimental trading strategy. The Exchange reinstated both members after the members certified that they would not allow others to access or trade for their account, they would not access others' accounts, and they would not pre-arrange trades in the future.</p> <p>The Division is concerned that the Exchange reinstated members, and closed preliminary reviews, where the Exchange had information that trade practice violations may have occurred. In fact, the Exchange did not conduct investigations in matters where members expressly admitted to activity that appears to contravene Exchange rules. For example, in the matter commenced on February 9, 2015, involving the spouses who appear to have pre-arranged trades and shared account information, the Exchange had a reasonable basis to investigate whether the members had violated various Exchange rules, including:</p> <ul style="list-style-type: none"> • Exchange Rule 3.1(f), providing that an individual member may not maintain or trade more than one account; • Exchange Rule 5.2(d), providing that a member may not share user IDs and passwords; • Exchange Rule 5.19(b), providing that a member may not enter into non-competitive trades; • Exchange Rule 5.19(g), providing that an individual member may not trade for any other person or entity; and • Exchange Rule 5.19(k), providing that no person shall intentionally provide misleading, erroneous, or fraudulent information to the Exchange. 	
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<p>§ 38.158 Investigations and investigation reports <i>(continued)</i></p>	<p>Similarly, in the matter commenced on July 25, 2015, involving members who admitted to trading opposite one another, the Exchange had a reasonable basis to investigate whether the members had violated the prohibition on pre-arranged trading under Exchange Rule 5.19(b). Given the facts and circumstances of these matters, the Division believes that the Exchange should have elevated its preliminary reviews to investigations.</p> <p><u>Market Maker Alerts with No Investigation</u></p> <p>The Exchange closed 268 Almas alerts during the target period relating to its two market makers, without opening investigations into potential violations of Exchange rules by the market makers.</p> <p>Specifically, Exchange Rule 4.4(a) (Obligations of Market Makers) provides that “[t]ransactions of Market Makers should constitute a course of dealings reasonably calculated to contribute to the maintenance of a fair and orderly market, and Market Makers shall not make bids or offers or enter into transactions that are inconsistent with such a course of dealings.” However, on 268 occasions during the target period, the market makers quoted prices that resulted in trades that were not priced consistently with the underlying market at the time of the trades.</p> <p>Exchange Rule 4.4(a) also requires market makers to “maintain two-sided displayed quotes” and “comply with all other terms of the</p>	<p><u>Deficiency</u></p> <p>Rather than closing a matter and reinstating a suspended member after a preliminary review, Nadex must conduct an investigation upon receipt of information indicating that a violation may have occurred. Nadex must also create an investigation report in accordance with Commission regulations 38.158(c) and 38.158(d).</p>
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<p>§ 38.158 Investigations and investigation reports (continued)</p>	<p>applicable Market Maker Agreement.”³¹ However, on 137 out of the 268 occasions referenced above, the market makers failed to maintain both sides of the market.</p> <p>After conducting preliminary reviews of the 268 alerts relating to market makers, the Exchange closed the alerts without further investigation. The Division is concerned that the Exchange did not adequately address potential violations of Exchange Rule 4.4.</p> <p>The closing narratives for the alerts did not provide sufficient detail for the Division to determine why the Exchange closed the alerts. For example, the Exchange stated in numerous closing narratives that market makers had experienced a temporary pricing malfunction, but the narratives did not analyze whether the market makers were in violation of Exchange Rule 4.4. The documentation the Division received from the Exchange does not explain what caused the apparent pattern of pricing malfunctions that the market makers experienced.</p>	<p><u>Deficiency</u></p> <p>Pursuant to Commission regulation 38.158, the Exchange must conduct investigations upon the discovery or receipt of information that indicates a reasonable basis for finding that a violation by a market maker may have occurred. If, after conducting a preliminary review, the Exchange determines that an alert regarding a market maker does not warrant an investigation, the Exchange must include sufficient detail in the closing narrative to explain why the alert was closed.</p>
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³¹ The Exchange filed a certification revising section (a) of Exchange Rule 4.4 after the target period, on June 16, 2017, with an effective date of July 3, 2017. Revised Exchange Rule 4.4 provides that market makers are required to “maintain two-sided displayed quotes, insofar as required by the Market Maker Agreement” (emphasis added). The certification also revised the Exchange’s form of Market Maker Agreement to provide that a market maker “will not be required to price a two-sided market” in certain circumstances, including “during the first 30 seconds and last 30 seconds of any Intraday 5-Minute Binary Contract.”

<p>§ 38.158 Investigations and investigation reports (continued)</p>	<p><u>Warning Letters</u></p> <p>The Exchange did not issue any warning letters during the target period.</p>	
<p>§ 38.159 Ability to obtain information</p>	<p>The Exchange’s Rulebook provides compliance staff with the ability to obtain testimony and books and records from Exchange members in investigations and hearings.³²</p>	<p>No deficiencies or recommendations.</p>
<p>Core Principle 7 – Availability of General Information</p>		
<p>§ 38.401 General requirements</p>	<p>Commission regulation 38.401(a)(1) provides that a DCM “must have procedures, arrangements and resources for disclosing to the Commission, market participants and the public accurate information pertaining to: (i) Contract terms and conditions; (ii) Rules and regulations pertaining to the trading mechanisms; and (iii) Rules and specifications pertaining to operation of the electronic matching platform or trade execution facility.” A DCM must place such information on its website pursuant to Commission regulation 38.401(a)(3).</p> <p>The Exchange’s market maker program constitutes a “rule” subject to the public disclosure requirements of Commission regulation 38.401(a).</p> <p>The Division notes that the Exchange has posted a form of Market Maker Agreement on its website, but the Exchange has not posted the specific agreements to which its two market makers are parties. Those agreements permit the market makers to withdraw from a market between one and five minutes before the expiration of a given contract,</p>	<p>See deficiency below.</p>

³² See Exchange Rule 3.3(a) (Member Obligations).

<p>§ 38.401 General requirements (continued)</p>	<p>depending on the type of contract.</p> <p>Given that market makers are on one side of approximately 99 percent of all trades, the withdrawal of a market maker could effectively eliminate the liquidity that otherwise appears to be present in a contract.</p> <p>After the target period, on June 16, 2017, Nadex filed a certification revising the form of Market Maker Agreement publicly available on the Exchange's website, to provide that a market maker is permitted to withdraw from a market during (a) the 5 minute period just prior to expiry of any event contract; (b) the 2 minute period just prior to expiry of any intraday, daily, or weekly contract, with the exception of intraday 5-minute and 20-minute contracts; and (c) the 1 minute period just prior to the expiry of any intraday 5-minute or 20-minute contract. The revisions were effective as of July 3, 2017. They address the Division's concerns during the target period regarding the availability of information regarding the material terms of the Market Maker Agreements.</p>	<p><u>Deficiency</u></p> <p>During the target period, Nadex did not make the material terms of the Market Maker Agreements with its two market makers readily available on the Exchange's website, in accordance with Commission regulation 38.401. The Exchange has since cured this deficiency pursuant to the rule filing described above.</p>
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Appendix B

NORTH AMERICAN DERIVATIVES EXCHANGE RULE ENFORCEMENT REVIEW TABLE OF CORE PRINCIPLES AND REGULATIONS REVIEWED

§ 38.150 Core Principle 2.

(a) In general. The board of trade shall establish, monitor, and enforce compliance with the rules of the contract market, including:

(1) Access requirements;

(2) The terms and conditions of any contracts to be traded on the contract market; and

(3) Rules prohibiting abusive trade practices on the contract market.

(b) Capacity of contract market. The board of trade shall have the capacity to detect, investigate, and apply appropriate sanctions to any person that violates any rule of the contract market.

(c) Requirement of rules. The rules of the contract market shall provide the board of trade with the ability and authority to obtain any necessary information to perform any function described in this section, including the capacity to carry out such international information-sharing agreements, as the Commission may require.

§ 38.152 Abusive trading practices prohibited.

A designated contract market must prohibit abusive trading practices on its markets by members and market participants. Designated contract markets that permit intermediation must prohibit customer-related abuses including, but not limited to, trading ahead of customer orders, trading against customer orders, accommodation trading, and improper cross trading. Specific trading practices that must be prohibited by all designated contract markets include front-running, wash trading, pre-arranged trading (except for certain transactions specifically permitted under part 38 of this chapter), fraudulent trading, money passes, and any other trading practices that a designated contract market deems to be abusive. In addition, a designated contract market also must prohibit any other manipulative or disruptive trading practices prohibited by the Act or by the Commission pursuant to Commission regulation.

§ 38.153 Capacity to detect and investigate rule violations.

A designated contract market must have arrangements and resources for effective enforcement of its rules. Such arrangements must include the authority to collect information and documents on both a routine and non-routine basis, including the authority to examine books and records kept by the designated contract market's members and by persons under investigation. A designated contract market's arrangements and resources must also facilitate the direct supervision of the market and the analysis of data collected to determine whether a rule violation occurred.

§ 38.155 Compliance staff and resources.

(a) Sufficient compliance staff. A designated contract market must establish and maintain sufficient compliance department resources and staff to ensure that it can conduct effective audit trail reviews, trade practice surveillance, market surveillance, and real-time market monitoring. The designated contract market's compliance staff also must be sufficient to address unusual market or trading events as they arise, and to conduct and complete investigations in a timely manner, as set forth in § 38.158(b) of this part.

(b) Ongoing monitoring of compliance staff resources. A designated contract market must monitor the size and workload of its compliance staff annually, and ensure that its compliance resources and staff are at appropriate levels. In determining the appropriate level of compliance resources and staff, the designated contract market should consider trading volume increases, the number of new products or contracts to be listed for trading, any new responsibilities to be assigned to compliance staff, the results of any internal review demonstrating that work is not completed in an effective or timely manner, and any other factors suggesting the need for increased resources and staff.

§ 38.156 Automated trade surveillance system.

A designated contract market must maintain an automated trade surveillance system capable of detecting and investigating potential trade practice violations. The automated system must load and process daily orders and trades no later than 24 hours after the completion of the trading day. In addition, the automated trade surveillance system must have the capability to detect and flag specific trade execution patterns and trade anomalies; compute, retain, and compare trading statistics; compute trade gains, losses, and futures-equivalent positions; reconstruct the sequence of market activity; perform market analyses; and support system users to perform in-depth analyses and ad hoc queries of trade-related data.

§ 38.157 Real-time market monitoring

A designated contract market must conduct real-time market monitoring of all trading activity on its electronic trading platform(s) to identify disorderly trading and any market or system anomalies. A designated contract market must have the authority to adjust trade prices or cancel trades when necessary to mitigate market disrupting events caused by malfunctions in its electronic trading platform(s) or errors in orders submitted by members and market participants. Any trade price adjustments or trade cancellations must be transparent to the market and subject to standards that are clear, fair, and publicly available.

§ 38.158 Investigations and investigation reports.

(a) Procedures. A designated contract market must establish and maintain procedures that require its compliance staff to conduct investigations of possible rule violations. An investigation must be commenced upon the receipt of a request from Commission staff or upon the discovery or receipt of information by the designated contract market that indicates a reasonable basis for finding that a violation may have occurred or will occur.

(b) Timeliness. Each compliance staff investigation must be completed in a timely manner. Absent mitigating factors, a timely manner is no later than 12 months after the date that an

investigation is opened. Mitigating factors that may reasonably justify an investigation taking longer than 12 months to complete include the complexity of the investigation, the number of firms or individuals involved as potential wrongdoers, the number of potential violations to be investigated, and the volume of documents and data to be examined and analyzed by compliance staff.

(c) Investigation reports when a reasonable basis exists for finding a violation. Compliance staff must submit a written investigation report for disciplinary action in every instance in which compliance staff determines from surveillance or from an investigation that a reasonable basis exists for finding a rule violation. The investigation report must include the reason the investigation was initiated; a summary of the complaint, if any; the relevant facts; compliance staff's analysis and conclusions; and a recommendation as to whether disciplinary action should be pursued.

(d) Investigation reports when no reasonable basis exists for finding a violation. If after conducting an investigation, compliance staff determines that no reasonable basis exists for finding a violation, it must prepare a written report including the reason(s) the investigation was initiated; a summary of the complaint, if any; the relevant facts; and compliance staff's analysis and conclusions.

(e) Warning letters. No more than one warning letter may be issued to the same person or entity found to have committed the same rule violation within a rolling twelve month period.

§ 38.159 Ability to obtain information.

A designated contract market must have the ability and authority to obtain any necessary information to perform any function required under this subpart C of the Commission's regulations, including the capacity to carry out international information sharing agreements as the Commission may require. Appropriate information sharing agreements can be established with other designated contract markets and swap execution facilities, or the Commission can act in conjunction with the designated contract market to carry out such information sharing.

§ 38.400 Core Principle 7.

The board of trade shall make available to market authorities, market participants, and the public accurate information concerning:

- (a) The terms and conditions of the contracts of the contract market; and
- (b) (1) The rules, regulations and mechanisms for executing transactions on or through the facilities of the contract market, and
- (2) The rules and specifications describing the operation of the contract market's:
 - (i) Electronic matching platform, or
 - (ii) Trade execution facility.

§ 38.401 General requirements.

(a) General. (1) A designated contract market must have procedures, arrangements and resources for disclosing to the Commission, market participants and the public accurate information pertaining to:

- (i) Contract terms and conditions;

- (ii) Rules and regulations pertaining to the trading mechanisms; and
- (iii) Rules and specifications pertaining to operation of the electronic matching platform or trade execution facility.

(2) Through the procedures, arrangements and resources required in paragraph (a) of this section, the designated contract market must ensure public dissemination of information pertaining to new product listings, new rules, rule amendments or other changes to previously-disclosed information, in accordance with the timeline provided in paragraph (c) of this section.

(3) A designated contract market shall meet the requirements of this paragraph (a), by placing the information described in this paragraph (a) on the designated contract market's Web site within the time prescribed in paragraph (c) of this section.

(b) Accuracy requirement. With respect to any communication with the Commission, and any information required to be transmitted or made available to market participants and the public, including on its Web site or otherwise, a designated contract market must provide information that it believes, to the best of its knowledge, is accurate and complete, and must not omit material information.

(c) Notice of regulatory submissions. (1) A designated contract market, in making available on its Web site information pertaining to new product listings, new rules, rule amendments or other changes to previously-disclosed information, must place such information and submissions on its Web site concurrent with the filing of such information or submissions with the Secretary of the Commission.

(2) To the extent that a designated contract market requests confidential treatment of any information filed with the Secretary of the Commission, the designated contract market must post on its Web site the public version of such filing or submission.

(d) Rulebook. A designated contract market must ensure that the rulebook posted on its Web site is accurate, complete, current and readily accessible to the public. A designated contract market must publish or post in its rulebook all new or amended rules, both substantive and non-substantive, on the date of implementation of such new or amended rule, on the date a new product is listed, or on the date any changes to previously-disclosed information take effect.

§ 38.650 Core Principle 12.

The board of trade shall establish and enforce rules:

- (a) To protect markets and market participants from abusive practices committed by any party, including abusive practices committed by a party acting as an agent for a participant; and
- (b) To promote fair and equitable trading on the contract market.

§ 38.651 Protection of markets and market participants.

A designated contract market must have and enforce rules that are designed to promote fair and equitable trading and to protect the market and market participants from abusive practices including fraudulent, noncompetitive or unfair actions, committed by any party. The designated contract market must have methods and resources appropriate to the nature of the trading system and the structure of the market to detect trade practice and market abuses and to discipline such behavior, in accordance with Core Principles 2 and 4, and the associated regulations in subparts C and E of this part, respectively. The designated contract market also must provide a

competitive, open and efficient market and mechanism for executing transactions in accordance with Core Principle 9 and the associated regulations under subpart J of this part.