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June 29, 2011

Via E-Mail: submissions@cftc.gov

Mr. David Stawick
Secretary of the Commission
Office of the Secretariat
Commodity Futures Trading Commission
3 Lafayette Centre
1155 21st Street, N.W.
Washington D.C. 20581

**RE: Rule Certification: Nadex Amends its Rules to Add "Post Only" Orders as a Permissible Order Type – Submission pursuant to Commission Regulation 40.6(a)**

Dear Mr. Stawick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended ("Act"), and section 40.6(a) of the regulations promulgated by the Commodity Futures Trading Commission (the "Commission") under the Act (the "Regulations"), North American Derivatives Exchange, Inc. ("Nadex") hereby submits to the Commission its intent to amend its Rules to include a new permissible order type: Post Only orders. Nadex intends to make these changes effective no sooner than July 11, 2011, but Nadex notes that these changes will effectively have no impact until after Nadex has added at least one additional market maker on the Exchange.

The aforementioned amendments are summarized in Exhibit A. The applicable rule amendments are defined in Exhibit B. Any rule deletions are stricken out while the amendments and/or additions are underlined.

*Introduction*

Post-Only orders generally are designed to encourage the posting of liquidity, rather than taking liquidity from a market. Nadex currently has a single market maker that makes markets in all Nadex products. Because Nadex's markets still are developing, the market maker's bid-ask is typically the market's bid-ask spread (that is, the market maker is typically both the best bid and the best offer in a market); moreover, the great majority of trades that occur on Nadex involve the market maker as either the buyer or the seller in any given transaction. Nadex believes the addition of a requirement that all market maker quotations be submitted as Post-Only orders will encourage additional entities to pursue the opportunity to become a market maker, result in tighter spreads in the Market and protect against illusory volume or harmful trading activity.

*How Post-Only Orders Work*

The basic concept of this order type is that a market-maker's Post-Only orders could match against only traditional limit orders of other market participants on the Exchange and could not match opposite other market makers' post-only orders. The match opposite a traditional limit order would occur whether it is a resting limit order or a new limit order attempting to take the price of the resting post-only order. While market makers generally would be required to submit all bids and offers as Post-Only orders[1], other market participants who are not market maker's would continue to submit only limit orders, as they currently do.

Essentially, when a Post-Only order is submitted to the Nadex Exchange, the order is checked against the order book and, if that order is not immediately executable opposite another Post-Only order, the order will be placed into the order book. If the post-only order would be immediately executable opposite another Post-Only order, in whole or in part (thereby taking liquidity from the market), that newly submitted post-only order will not be placed into the order book. Depending on the type of post-only order, it may either be cancelled (a "Post-Only (reject) order") or cancelled and replaced with an order at a price that is adjusted to one minimum price increment below the current low offer (for bids) or above the current best bid (for offers) (a "Post-Only (price adjustment) order").

- **Post-Only (reject) orders** would work as follows:

  - If the Exchange receives a new Post-Only order (reject) to **buy** that would be immediately executable opposite a resting Post-Only order to sell at the same or a lower price, then the new Post-Only order to buy is rejected. Otherwise, it goes into the book as a resting post-only order to buy.

  - If the Exchange receives a new Post-only order (reject) to **sell** that would be immediately executable opposite a resting Post-Only order to buy at the same or a higher price, then the new Post-Only order to sell rejected. Otherwise, it goes into the book as a resting post-only order to sell.

- **Post-Only (price adjustment) orders** would work as follows:

[1] An exception exists for a market maker with a large position in a particular contract or class of contracts. A market maker who has a position that is at or above 90% of the applicable position limit has the right under the Market Maker Agreement and rules to stop market-making in that contract. At that point, the rules would allow the market maker to enter traditional limit orders (rather than Post-Only orders) in an effort to liquidate some of its large position down to a more acceptable level – 75% – of the applicable position limit Like any other market participant's limit order, such traditional limit orders submitted by a market maker seeking to reduce its position could be matched opposite another market maker's Post-Only orders.

- If the Exchange receives a new Post-Only order to **buy** that would be immediately executable opposite a resting Post-Only order to sell at the same or a lower price, then the new Post-Only order to buy is amended to a Price one "minimum increment" lower than the price of the resting Post-Only order to sell.

- If a new Post-Only order to **sell** that is received by the Exchange would be immediately executable opposite a resting Post-Only order to buy at the same or a higher price, then the new Post-Only order to sell is amended to a Price one "minimum increment" higher than the price of the resting Post-Only order to buy.

- These amendments can be accomplished by a cancel/replace, whereby the original Post-Only order is cancelled and a new Post-Only order is submitted at the adjusted price. The new Order would go into the book with the time priority of the replacing order (as opposed to the time of the original, rejected order). Note that even though the original Post-Only order was willing to buy (or sell) at a higher (or lower) price than the adjusted price, the order still goes into the order book behind any resting orders that exist at the time the adjusted order is submitted.

For both types of orders, if there are any resting limit orders to sell at the same or even worse price as resting post-only orders to sell, then a Post-Only order to buy at that price (of the limit orders) would execute against the resting limit orders to the extent of the quantities available, but any remaining quantity of the Post-Only order to buy would be either rejected (Post-Only (reject)) or adjusted (Post-Only (price adjustment)) as appropriate.

Examples of the manner in which these Post-Only orders would function in Nadex markets are set forth in Exhibit C.

*Expected Benefits of Post-Only Orders*

Nadex believes the proposed rules regarding Post-Only orders will encourage additional entities to pursue the opportunity to become a market maker, result in tighter spreads in the Market and protect against illusory volume or harmful trading activity.

Currently, Nadex has only one designated market maker, Market Risk Management, Inc., which is an affiliate of Nadex. When Nadex initially was developing its markets, the volume levels were not large enough to encourage non-affiliated entities to assume the obligations of becoming a market maker. As Nadex's volumes continue to increase, however, we expect unaffiliated entities to begin to indicate an interest in becoming a market maker on Nadex. The post-only order concept should further encourage such interest. Market makers assume an obligation to make two-sided markets of a certain minimum size at a certain maximum bid-ask spread. Without the post-only order type, if two market makers are pricing a contract and the first market maker is bidding the same price that the second market maker is offering (assuming their respective bid-ask spreads already are at the maximum, precluding them from simply widening their spreads), the two market makers would be obliged to trade at the locked price and then continue replenishing their respective bid or offer, repeating this trading cycle until one or both reaches the position limits or one or both of their pricing models leads them to change their respective bid/offer to unlock the market. Clearly, such trading is not in the interest of the market, other market participants or the market makers.

Moreover, as the relatively simple examples in Exhibit C show, the use of post-only orders can result in a tighter, deeper market for other participants to take advantage of. Not only does the functionality of the post-only order facilitate tighter spreads (as shown in Exhibit C), but Nadex believes that market makers will tend to tighten their own bid-ask spread (to the further benefit of the market) if they are comfortable that they won't get slammed by large orders from another market maker if they price a bit too aggresively.

Finally, the use of post-only orders can protect the market against illusory volume or harmful trading activity. As noted above, in the absence of the post-only order type, under certain conditions, two market makers could find themselves is a situation where they are obliged to continue entering opposite orders at the same price, generating unnecessary trades. Moreover, in the event that a market maker actually misprices a contract (rather than just having a different view on valuation), series of trades at "bad" prices could quickly occur, potentially misleading other market participants and leaving one market maker with a potentially very expensive mistake.

No substantive opposing views were expressed to Nadex with respect to these additions. Moreover, various forms of post-only orders are common in other domestic and international markets. (See Exhibit D for a list of markets that permit some form of post-only order).

Nadex hereby certifies that the revisions contained herein comply with the Act and the Commission Regulations adopted thereunder.

Should you have any questions regarding the above, please do not hesitate to contact me by telephone at (312) 884-0171 or by email at tim.mcdermott@nadex.com.

Sincerely,

Timothy G. McDermott

Timothy G. McDermott
General Counsel and Chief Regulatory Officer

CC: DMOSubmission@cftc.gov
Jon Hultquist – CFTC (Acting Branch Chief, DMO, Chicago)
Riva Adriance – CFTC
Nancy Markowitz – CFTC

Yossi Beinart - Nadex

# EXHIBIT A

| Rule | Asset | Duration/ Close Time | Action | Effective Date |
|---|---|---|---|---|
| 4.4 | Obligations of Market Makers | N/A | Require market makers' orders to be "Post-Only" orders | 07/11/2011 |
| 5.5 | Order Entry | N/A | Amend provisions regarding order placement. | 07/11/2011 |
| 5.10 | Acceptable Orders | N/A | Add definitions and explanation of "Post-Only order", "Post-Only (reject) order", and "Post-Only (price adjustment) order" | 07/11/2011 |
| 5.11 | Priority of Orders | N/A | Add "Subject to the provisions of Rule 5.10(b)..." language | 07/11/2011 |
| 5.12 | Filling Orders to Trade Contracts | N/A | Add "Subject to the provisions of Rule 5.10(b)..." language | 07/11/2011 |

## EXHIBIT B

### Amendment of Rules 4.4, 5.5, 5.10, 5.11 and 5.12

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

RULE 1.1 – RULE 4.3 [Unchanged]

RULE 4.4 OBLIGATIONS OF MARKET MAKERS

(a) General – Transactions 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. Ordinarily, Market Makers shall be obligated to do the following:

(i) trade for the proprietary account of the Market Maker only;

(ii) maintain at least the minimum capital on deposit with Nadex in accordance with the terms of the applicable Market Maker Agreement;

(iii) comply with all other terms of the applicable Market Maker Agreement; and

(iv) maintain two-sided displayed quotes of a minimum designated quantity ("Size") within a predefined spread ("Bid/Ask Spread") for a Series of Contracts for a certain period of time throughout the trading day in accordance with the terms of the applicable Market Maker Agreement.

(1) In ordinary market conditions, quotes must be made within a maximum Bid/Ask Spread.

(2) In fast market conditions, Market Makers will be permitted to reduce their size or widen their Bid/Ask Spreads.

(3) Market Makers also will be permitted to reduce their size or widen their Bid/Ask Spreads:

(i) in any Binary Contract within a Designated Class that is so deep in-the-money as to be valued at $100 offer or so deep out-of-the-money as to be valued at zero bid and

(ii) in any Variable Payout Contract within a Designated Class when the underlying for that Variable Payout Contract is outside the range of the Variable Payout Contract.

(b) A Market Maker has a continuous obligation to engage, to a reasonable degree under the existing circumstances, in dealings for the account of the Market Maker when there exists, or it is reasonably anticipated that there will exist, a lack of price continuity or a temporary disparity between the supply of and demand for quotations in a Series of a Designated Class to which the Market Maker is appointed. Without limiting the foregoing, a Market Maker is expected to perform the following activities in the course of maintaining a fair and orderly market;

(i) To post bid and ask quotations in all Designated Classes to which the Market Maker is appointed that, absent changed market conditions, will be honored by the Market Maker.

(ii) To update quotations in response to changed market conditions in all Designated Classes to which the Market Maker is appointed.

(iii) <u>All such Market Maker quotations shall be submitted as "Post-Only orders". In the event a Market Maker has built of position size equal to or greater than 90% of any applicable position limit in a particular Class or Contract, then that Market Maker may submit non-Post-Only orders (that is, traditional limit orders) for such Class or Contract until the Market Maker's position in such Class or Contract has been reduced to 75% of the applicable position limit, at which point the Market Maker's obligation to submit Post-Only orders will resume.</u>

(c) Like other Members of Nadex, a Market Maker may not place an order to buy or sell a Contract in a Designated Class for which it has not been appointed a Market Maker unless it has the excess funds in its Nadex account necessary to fulfill its obligations under that order.

(d) Alternative Position Limits for Certain Binary Contracts

(i) Approved market makers who are engaged in bona fide market-making activity shall be exempt from the position limits for those Binary Contracts defined in

a. Rules 12.55 (Japan 225), 12.57 (Korea 200), 12.89 (Wall Street 30), 12.90 (US Tech 100), 12.91 (US 500) and 12.99 (US SmallCap 2000) of these Rules. Instead, such market makers shall be subject to Alternative Position Limits of twice the limit identified for such Binary Contract in Chapter 12. In addition, such Alternative Position Limits shall apply not to the entire class of Binary Contracts, but to each Binary Contract in that Class (i.e., per strike).
b. Rules 12.3 (Copper), 12.5 (Gold), 12.7 (Silver), 12.9 (Crude Oil), 12.11 (Natural Gas), 12.49 (FTSE 100) and 12.51 (Germany 30) of these Rules. Instead, such market makers shall be subject to Alternative Position Limits of the limit identified for such Binary Contract in Chapter 12, which limit

shall apply not to the entire class of Binary Contracts, but to each Binary Contract in that Class (i.e., per strike).

(ii) A market maker taking advantage of this exemption and an Alternative Position Limit must, within 1 business day following a request by Nadex's Compliance Department, provide the Nadex Compliance Department with a trade register detailing all futures trading activity in any account owned or controlled by the market maker in the futures contract underlying a Binary Contract during the 15 minutes immediately before and after any expiration time identified by Nadex's Compliance Department in the request.

RULE 5.1 – RULE 5.4 [Unchanged]

RULE 5.5 ORDER ENTRY

(a) Trading Member Orders

(i) A Trading Member will enter orders to trade Contracts by electronic transmission over the Internet. A Trading Member may elect to enter into a FIX Connection agreement with Nadex, which will provide for specific FIX Connection fees, and certain approved Entity Trading Members, such as market makers, may submit orders over a FIX Connection in accordance with Nadex's applicable policies and procedures.

(ii) A Trading Member will enter an order to trade one or more Contracts by indicating to Nadex in the manner required by Nadex: (1) order direction~~type~~ (i.e., buy or sell); (2) order type (e.g., limit order); (3) the Series of Contract; (4~~iii~~) the limit price at which the Trading Member wants to buy or sell the Contract; and (5~~iv~~) the number of Contracts the Trading Member want to buy or sell.

(iii) In order to enter an order to trade one or more Contracts, a Trading Member will be required to submit the order to Nadex. Once the order is accepted by Nadex, Nadex will assign to the order an order confirmation number. This confirmation number will appear next to the associated order on the Trading Member's Order Ticket and Order History account pages. The Trading Member will be responsible for any and all order entries confirmed for its account and accepted by Nadex

(b) FCM Customer Orders

(i) A FCM Customer may not submit orders directly to the Exchange and all such order must be submitted by that Customer's FCM Member.

(ii) FCM Members may submit FCM Customer Orders by electronic transmission over a FIX Connection, in accordance with Nadex's applicable policies and procedures.

(iii) FCM Members will submit a FCM Customer Order to trade one or more Contracts by indicating to Nadex in the manner required by Nadex: (1) order direction~~type~~ (i.e., buy or sell); (2) order type (e.g., limit order); (3) the Series of Contract; (4~~iii~~) the limit price at which the FCM Customer wants to buy or sell the Contract; (5~~iv~~) the number of Contracts the FCM Customer wants to buy or sell; (6~~iv~~) the FCM Customer Position Account identifier; and (7~~iv~~) the user identifier for the person who directed the submission of the order to the Exchange.

(iv) Upon receipt of a FCM Customer Order to trade one or more Contracts, a FCM Member will be required to ensure that the FCM Customer has on deposit with the FCM Member enough funds to cover the FCM Customer's maximum loss under the Contract(s) it is attempting to enter into before the order is submitted to Nadex. When the order has been submitted to and accepted by Nadex, Nadex will assign to the order an order confirmation number. This confirmation number will appear next to the associated order on the FCM Member's Order and Order History account pages. The FCM Member will be responsible for any and all order entries confirmed for its FCM Customer Position Accounts and its settlement account and accepted by Nadex.

(c) Nadex's trading system will keep an electronic record of all orders to trade Contracts, and all executed Contract trades. The records kept by Nadex will include all of the terms identified in paragraphs (a)(ii) – (iii) and (b)(iii) – (iv) of this Rule as well as the date and time that the transaction was completed to the nearest tenth of a second, for all executed Contract trades and to the nearest second for all orders to trade Contracts.

RULE 5.6 – RULE 5.9 [Unchanged]

RULE 5.10 ACCEPTABLE ORDERS

(a) A Member who is not a Market Maker may enter only limit orders to trade Contracts on the Market. ~~(b)~~ For the purpose of this Rule, a "limit order" is an order to buy or sell the number of Contracts specified at the price specified, or a better price if a better price is available.

(b) Duly appointed Market Makers who are making markets pursuant to such appointment shall submit market maker quotations as Post-Only orders. "Post-Only orders" are orders that provide liquidity to a market in that they can be matched opposite any limit order submitted by a Member, but cannot be matched opposite another Post-Only Order submitted by another Market Maker. A Post-Only order, like a limit order, is an order to buy or sell the number of Contracts specified at the price specified, or a better price if a better price is available. However, unlike a limit order, Post-Only Orders will not be matched opposite another Post-Only order. Post-Only orders can be submitted in one of two forms: Post-Only (reject) and Post-Only (price adjustment).

(i) A "Post-Only (reject) order" is an order that will be cancelled by the Exchange in whole or in part to the extent that, at the time it is submitted to the Exchange, it would be immediately executable opposite another Post-Only order. If, however, some portion of such submitted Post-Only (reject) order would be immediately executable opposite any resting limit order(s), that part of such submitted Post-Only (reject) order will be matched opposite such resting limit order(s) by the Exchange. The remaining portion of the submitted Post-Only (reject) order will be cancelled by the Exchange, leaving the opposite Post-Only order in the order book.

(ii) A Post-Only (price adjustment) order is an order that will be cancelled by the Exchange in whole or in part to the extent that, at the time it is submitted to the Exchange, it would be immediately executable opposite another Post-Only order. If, however, some portion of such submitted Post-Only (price adjustment) order would be immediately executable opposite any resting limit order(s), that part of such submitted Post-Only (price adjustment) order will be matched opposite such resting limit order(s) by the Exchange. The remaining portion of the submitted Post-Only (price adjustment) order will be cancelled by the Exchange, leaving the opposite Post-Only order in the order book. Unlike a Post-Only (reject) order, however, upon cancellation of the submitted Post-Only (price adjustment) order, the Exchange will automatically submit an amended quotation for the unfilled balance of the cancelled Post-Only (price adjustment) order at a price level that is adjusted to one minimum tick increment lower (for bids) or higher (for offers) than the price level of the existing opposite Post-Only order.

## RULE 5.11 PRIORITY OF ORDERS

Subject to the provisions of Rule 5.10(b) regarding Post-Only orders, t~~T~~he Market's trading algorithms execute all trades by matching orders according first by price and then time priority. This means that orders entered at different prices will be executed in order of price, from best to worst, regardless of what time they were placed on the Market, and orders placed on the Market at the same price will be executed in order of time, from oldest to most recent.

## RULE 5.12 FILLING ORDERS TO TRADE CONTRACTS

Subject to the provisions of Rule 5.10(b) regarding Post-Only orders, t~~T~~he Nadex trading system will fill all orders to trade Contracts on an "or better" basis. This means that if a Member places an order to buy a Contract or Contracts at a price higher than the price of the best sell offer on the market, the system will fill that order to buy at the better sell offer price(s) until all available sell offers under or equal to that buy order's limit price are filled or until that buy order is completely filled. Likewise, if a Member enters a sell order at a price lower than the price of the best bid, the system will fill that sell order at the better bid price(s) until all available bids over that sell_order's limit price are filled or that sell order is completely filled. If an order is only partially filled, the unfilled portion of that order will remain in the order book as a resting order at the limit price specified. Should an opposite order at the same price or better than the original order subsequently be placed in the system, the unfilled portion of the original order will be executed opposite that new order at the original_order's limit price.

RULE 5.13 – RULE 12.78 [Unchanged]

*[End Rulebook]*

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## EXHIBIT C

The following examples demonstrate how Post-Only orders would work in certain market situations (market maker Post-Only orders are in italics):

### Example 1
**This example shows Post-Only orders that do not match opposite any existing orders in the current order book.**

Assume the following order book exists in a Nadex binary option market. Market Maker 1 ("MM1") has the current best bid and offer at $49/$51 in the form of Post-Only orders. Two other members, Members A and B, have standard limit orders in the book as well:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$51.00* | *100* | *MM1* |
| *MM1* | *100* | *$49.00* | | | | |
| Member B | 1 | $48.00 | | | | |

Market Maker 2 ("MM2") submits new Post-Only orders to buy/sell 200 contracts at $50/$51. MM2's bid becomes the best bid at $50 and MM2's $51 offer is behind the existing offer at $51 by Market Maker 1 based on time priority:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$51.00* | *200* | *MM2* |
| | | | | *$51.00* | *100* | *MM1* |
| *MM2* | *200* | *$50.00* | | | | |
| *MM1* | *100* | *$49.00* | | | | |
| Member B | 1 | $48.00 | | | | |

**Example 2**

**This example shows a Post-Only order that is entirely ineligible because the entire quantity would match opposite an existing Post-Only order in the current order book.**

Assume the following order book exists in a Nadex binary option market:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$51.00* | *200* | *MM2* |
| | | | | *$51.00* | *100* | *MM1* |
| *MM2* | *200* | *$50.00* | | | | |
| *MM1* | *100* | *$49.00* | | | | |
| Member B | 1 | $48.00 | | | | |

MM1 cancels its existing bid/offer at $49/$51 and submits Post-Only orders to buy/sell 100 contracts at $48/$50. MM1's post-only order to buy at $48 would be submitted to the order book and would be time priority placed behind Member B's order to buy 1 contract at $48. Because MM1's new Post-Only order to sell at $50 is at the same price as MM2's existing Post-Only bid at $50, MM1's new Post-Only order would be immediately executable against another post-only order and therefore does not go into the book. The impact on the order book of these orders depends on whether Market Maker1's orders were Post-Only (reject) or Post-Only (price adjustment) orders.

- If MM1's new order to sell 100 contracts at $50 is a <u>Post-Only (reject)</u>, then the order is simply cancelled and the order book looks like this:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$51.00* | *200* | *MM2* |
| *MM2* | *200* | *$50.00* | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM1* | *100* | *$48.00* | | | | |

Note that, if MM1's orders had been traditional limit orders rather than Post-Only (reject) orders, MM1's sell at $50 would have gone into the order book and immediately matched opposite MM2's buy at $50 for 100 lots. Thus, the market makers would have made a transaction that took 100 contracts of liquidity out of the order book, to the detriment of customers who would have wanted to sell at that price.

- If, instead, MM1's new order to sell 100 contracts at $50 is a <u>Post-Only (price adjustment)</u>, then that new order is cancelled and is replaced with an order adjusted one minimum price increment (in this case $0.25) away from the existing best bid:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$51.00* | *200* | *MM2* |
| | | | | *$50.25* | *100* | *MM1* |
| *MM2* | *200* | *$50.00* | | | | |
| *MM1* | *100* | *$49.00* | | | | |
| Member B | 1 | $48.00 | | | | |

Note that, if MM1's orders had been traditional limit orders rather than Post-Only (price adjustment) orders, MM1's sell at $50 would have gone into the order book and immediately matched opposite MM2's $50 bid for 100 lots. Thus, the market makers would have made a trade that took 100 contracts of liquidity out of the order book, and the "top of the book" available to other market participants would have been 100 contracts bid at $50 and 200 contracts offer at $51. Instead, the resulting book shown above is not only deeper, but also tighter with a bid/ask spread of $0.25.

**Example 3**
**This example shows a Post-Only order that is partially executable opposite a customer order with the remainder ineligible because it would match opposite an existing Post-Only order in the current order book.**

Assume the following order book exists in a Nadex binary option market:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *100* | *MM1* |
| *MM1* | *100* | *$50.00* | | | | |
| Member A | 1 | $50.00 | | | | |
| Member B | 1 | $48.00 | | | | |

MM2 submits new Post-Only orders to buy/sell 200 contracts at $47/$50. MM2's bid is placed into the order book behind Member B's bid due to price priority. MM2's $50 offer is at the same price as the $50 bids by MM1 and Member A (note that MM1's $50 bid has time priority over Member A's bid at the same price). Because MM2's Post-Only offer cannot match opposite a Post-Only bid, but can match opposite the tradition limit order bid, MM2's Post-Only offer will match opposite Member A's resting bid, and the remaining 199 lots of the order will be cancelled (if it is a Post-Only (reject) order) or adjusted in price to $50.25 (if it is a Post-Only (price adjustment) order). The resulting order book after these steps would look as follows:

- If MM2's offer was a post-only (reject) order

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *100* | *MM1* |
| *MM1* | *100* | *$50.00* | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM2* | *200* | *$47.00* | | | | |

- If MM2's offer was a post-only (price adjustment) order

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *100* | *MM1* |
| | | | | *$50.25* | *199* | *MM2* |
| *MM1* | *100* | *$50.00* | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM2* | *200* | *$47.00* | | | | |

Note that if the market maker orders had not been Post-Only orders and instead all had been traditional limit orders, MM2 would have traded against MM1 (100 lots) as well as Member A (1 lot) and the balance of MM2's offer would remain in the book, leaving the following:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *100* | *MM1* |
| | | | | *$50.00* | *99* | *MM2* |
| Member B | 1 | $48.00 | | | | |
| *MM2* | *200* | *$47.00* | | | | |

**Example 4**

**This example shows a Post-Only order that is partially executable opposite a customer order with the remainder ineligible because it would match opposite an existing Post-Only order in the current order book.**

Assume the following order book exists in a Nadex binary option market:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| *MM2* | *200* | *$50.00* | | | | |
| Member A | 1 | $50.00 | | | | |
| Member B | 1 | $48.00 | | | | |

MM1 submits new Post-Only orders to buy/sell 100 contracts at $47/$50. MM1's bid is placed into the order book behind Member B's bid due to price priority. MM1's $50 offer is at the same price as the $50 bids by MM2 and Member A (note that MM2's $50 bid has time priority over Member A's bid at the same price). Because MM1's Post-Only offer cannot match opposite a Post-Only bid, but can match opposite the tradition limit order bid, MM1's Post-Only offer will match opposite Member A's resting bid, and the remaining 99 lots of the order will be cancelled (if it is a Post-Only (reject) order) or adjusted in price to $50.25 (if it is a Post-Only (price adjustment) order). The resulting order book after these steps would look as follows:

- If MM1's offer was a Post-Only (reject) order

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| *MM2* | *200* | *$50.00* | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM1* | *100* | *$47.00* | | | | |

- If MM1's offer was a post-only (price adjustment) order

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| | | | | *$50.25* | *99* | *MM1* |
| *MM2* | *200* | *$50.00* | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM1* | *100* | *$47.00* | | | | |

Note that if the market maker orders had not been Post-Only orders and instead all had been traditional limit orders, MM1 would have traded 100 lots against MM2, whose order to buy at $50 had time priority over the 1-lot order of Member B. Member B would not have received a fill on his order, leaving the following:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| *MM2* | *100* | *$50.00* | | | | |
| Member A | 1 | $50.00 | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM1* | *100* | *$47.00* | | | | |

As this example shows, without the use of Post-Only orders, liquidity has been taken from the order book (only 101 contracts available at the best bid, not 200), the spread has not been narrowed (still $2.00) and the non-market maker order (member A's $50 bid) has not been filled.

**Example 5**

**This example shows a Post-Only order at a price that goes through an opposing existing post-only order's price. The new Post-Only order is partially executable opposite customer orders with the remainder disallowed because it would match opposite an existing Post-Only order in the current order book.**

This example is similar to Example 4, except the new Post-Only offer from MM1 goes through the resting Post-Only bid by MM2. Accordingly, assume the following order book exists in a Nadex binary option market:

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| *MM2* | *200* | *$50.00* | | | | |
| Member A | 1 | $50.00 | | | | |
| Member B | 1 | $48.00 | | | | |

MM1 submits new Post-Only orders to buy/sell 100 contracts at $46/$48. MM1's $46 bid is placed into the order book behind Member B's $48 bid. MM1's $48 offer is at a better price than the resting $50 bids of both MM2 and Member A and is the same price as the $48 bid by Member B. Because MM1's Post-Only offer cannot match opposite a Post-Only bid, but can match opposite the tradition limit order bids, MM1's post-only offer submitted at $48 will match 1-lot opposite Member A's resting $50 bid (getting the benefit of the resting bid at a better price than the offer) and 1-lot opposite Member B's resting $48 bid. The remaining 98 lots of the order will be cancelled (if it is a Post-Only (reject) order) or adjusted in price to $50.25 (if it is a Post-Only (price adjustment) order). The resulting order book after these steps would look as follows:

- If MM1's offer was a Post-Only (reject) order

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| *MM2* | *200* | *$50.00* | | | | |
| *MM1* | *100* | *$46.00* | | | | |

- If MM1's offer was a Post-Only (price adjustment) order

| | BIDS | | | | OFFERS | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| | | | | *$50.25* | *98* | *MM1* |
| *MM2* | *200* | *$50.00* | | | | |
| *MM1* | *100* | *$46.00* | | | | |

Note that if the market maker orders had not been Post-Only orders and instead all had been traditional limit orders, MM1 again (like the last example) would have traded 100 lots opposite MM2, whose order to buy at $50 had time priority over the 1-lot order of Member B. Neither Member A nor Member B would have received a fill on their orders, leaving the following:

| | **BIDS** | | | | **OFFERS** | |
|---|---|---|---|---|---|---|
| | | | | $52.00 | 1 | Member A |
| | | | | *$52.00* | *200* | *MM2* |
| *MM2* | *100* | *$50.00* | | | | |
| Member A | 1 | $50.00 | | | | |
| Member B | 1 | $48.00 | | | | |
| *MM1* | *100* | *$46.00* | | | | |

As this example shows, without the use of Post-Only orders, liquidity has been taken from the order book (only 101 contracts available at the best bid, not 200), the spread has not been narrowed (still $2.00) and the non-market maker orders (member A's $50 bid and Member B's $48 bid) have not been filled.

# EXHIBIT D

| Market | | Description of functionality |
|---|---|---|
| NasdaqOMX | Nasdaq Rule 4751(f)(10) | "Post-Only Orders" are orders that if, at the time of entry, would lock an order on the System, the order will be re-priced and displayed by the System to one minimum price increment (i.e., $0.01 or $0.0001) below the current low offer (for bids) or above the current best bid (for offers). |
| NYSE Arca | See http://www.nyse.com/equities/nysearcaequities/1157018931913.html | ALO: Adding Liquidity Only order: The ALO order is a limit order that is posted to the NYSE Arca book in order to add liquidity. The Order assists Users in controlling their costs. Once accepted and placed in the NYSE Arca book, ALO orders will not route to away market centers. The ALO order shall be Day Only, and may not be designated as Good Till Cancel (GTC). ALO orders will be rejected when interacting with Passive Liquidity (PL) Orders. ... |
| BATS | See http://www.batstrading.com/resources/features/bats_exchange_definitions.pdf | Post only orders allow users to make a market and specify not to remove liquidity. Any incoming post only orders that cross with a resting displayed order will be rejected. |
| Chi-X | See http://www.chx.com/content/trading_information/ms_ordertypes.html | Post Only: A Post Only order will be immediately cancelled if it is marketable against a contra-side order in the Matching System when entered. |
| Toronto Stock Exchange | See http://www.osc.gov.on.ca/en/26869.htm | Post Only order. An order to be posted on the Exchange without trading as an active order. Post Only is an optional feature that will kill an order immediately on entry if any part of the order is immediately executable during continuous trading. |