NASDAQ Futures, Inc. (NFX) General Reference Guide

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Nasdaq

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1EXECUTIVE SUMMARY

Nasdaq Futures, Inc. (NFX or Exchange) is a Designated Contract Market regulated by the U.S. Commodity Futures Trading Commission (CFTC). NFX is a wholly owned subsidiary of The NASDAQ OMX Group, Inc. (Nasdaq: NDAQ), a leading provider of trading, exchange technology, information and public company services across six continents.

NFX is one of Nasdaq's four U.S. derivative exchanges, which taken together with Nasdaq Nordic, one of the largest derivatives exchanges in Europe, Nasdaq Commodities, and Nasdaq NLX, a London based market for trading interest rate derivatives, represent a global Futures offering spanning a wide array of asset classes.

NFX is an all-electronic exchange utilizing Nasdaq's high-performance and proven technology, which provides market participants with advanced functionality for central limit Order Book ("CLOB") trading as well as real-time Off-Order Book trade reporting on the same Trading System (trading platform). The Exchange offers the opportunity to trade a competitive mix of new Futures and Options products on a 23 x 5 hours/days basis.

All clearing services for products listed on the exchange are provided by The Options Clearing Corporation (OCC). OCC, founded in 1973, is the world's largest equity derivatives clearing organization, and is a globally recognized entity that clears a multitude of diverse and sophisticated products. OCC operates as horizontal clearing provider servicing sixteen exchanges under the jurisdiction of both the U.S. Securities and Exchange Commission (SEC) and the CFTC. As a registered clearing agency under SEC jurisdiction, OCC clears transactions for exchange-listed options, security futures and OTC options. As a registered derivatives clearing organization under CFTC jurisdiction, OCC offers clearing and settlement services for transactions in futures and options on futures.

1.1 Introduction

The objective of this document is to provide an overview of the NFX market as well as act as an explanatory reference guide for the key concepts and services provided by NFX. The content is directed toward non-programming users who wish to gain a reasonable understanding of the operation of the NFX Trading System related to:

- Technology & Market Model
- Participant, User, and Account Configuration
- On-Exchange Trading including supported Order types
- Off-Exchange Trade Submission
- Risk Management Controls
- Contact Information

This document provides a set of references to other documents that provide more detailed information in specific areas. For consultation of terms used herein, please refer to the NFX Rulebook.

Please note that this document shall not supersede the NFX Rulebook. This document is intended to supplement the Rules.

1.2 Interfaces, API's, and Market Data

NFX is built upon the Nasdaq trading infrastructure which powers one in ten of the world's securities transactions, and leverages the expertise and knowledge of tried and trusted partners to create an efficient and robust market for the entire lifecycle of the trade.

The primary NFX trading platform is located in Chicago, IL within close proximity to other major futures exchange market centers. The disaster recovery site is co-located with other Nasdaq U.S. markets in Carteret, NJ. NFX offers market participants and Independent Software Vendors (ISV), Application Programming Interfaces (APIs) to create custom applications and services to suit specific needs, including customized algorithmic trading, risk management, data services and straight-through processing

NFX supports order management through FIX while market data can be obtained through Nasdaq ITCH:

- **Order Management** is done through a FIX 5.0 gateway. The NFX FIX implementation also includes FIX reference data as well as a FIX drop copy service.

- **Market Data** is available through an ITCH and AMD "NFX Auxiliary Market Data" feed. The ITCH feeds are taken straight from the matching engine to achieve ultra-low latency and full depth of market by order (MBO). Basic reference data, Orders, trades, and the net order imbalance indicator is distributed via the ITCH feed while reported trades, trade cancels, settlement prices, open interest, etc., is distributed via the NFX Auxiliary Market Data feed. In order to support firms to quickly recover the MBO status in the event that they experience issues in regard to their ITCH feed, GLIMPSE is offered as a point-to-point data feed connection that provides direct datafeed customers with a snapshot of the current state of the Order Book(s).

Technology source document specifications are at: **www.nasdaqomx.com/nasdaq-futures**.

2 OVERVIEW OF THE MARKET

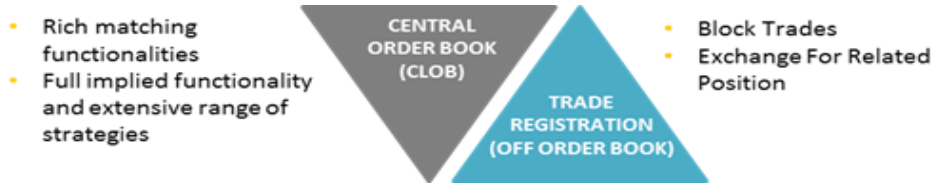
NFX facilitates trading in Energy and U.S. Treasury Futures and Options on Futures.

The terms of the products are standardized and detailed via the NFX product specifications and published in the NFX Rulebook. New Instrument series (contract months & strikes) are automatically generated by the platform as outlined in the product specifications.

This chapter provides an overview of the market structure, the relational model in the platform including participants, users, and accounts, as well as how to connect.

2.1 Market Structure

NFX is utilizing Nasdaq's high-performance and proven technology, which provides market participants with advanced functionality for central limit Order Book trading as well as real-time Off-Order Book trade reporting on the same platform.



The Trading Day is comprised of a set of defined sessions. There are various ways to participate in each session.

Trading starts with a Pre-Open Session prior to automatic trade matching or continuous trading in the Open Session. During the Pre-Open Session, price information disseminated includes an indicative Equilibrium Price (price at which the most quantity will execute with the lowest imbalance) when such a price can be established based on existing Order Book information. When an Equilibrium Price can be established, this price and the cumulative volume eligible for matching at that price will be shown on the first price level on both sides of the Order Book. During the Pre-Open Trade Session, pre-existing GTC and GTD Orders may be modified or canceled. Market Orders and Cross Orders will not be accepted during the Pre-Open Session. Any Order with a Time in Force Condition of FOK or IOC would also be rejected during the Pre-Open Session.

The Pre-Open Session is followed by the automatic trade matching or continuous Trading Session (the "Open Session"). The Pre-Open session ends with the uncross operation for transition to continuous trading. The opening price and allocation of matched trades are determined at this time.

In the Open Session, each new incoming Order is immediately checked for execution against Order(s) on the opposite side of the Order Book. Orders can be executed in full or partially. Orders in the Order Book will be matched utilizing the Price-Time execution algorithm unless otherwise specified.

The market closes at the end of the Open Session (Close Session). During the Close Session, no matching of Orders (including Quotes) will take place. All unexecuted Orders which have expired at the end of the current Trading Day will be automatically canceled.

Following the Close Session, the Post-Close Session is available to modify and or cancel orders with attached time conditions. During the Post-Close Session, no matching of Orders (including Quotes) will take place.

Further details on the various sessions can be found in the NFX Rule Book at Chapter IV, Section 3.

2.1.1 Order Book ("On-Exchange Trades")

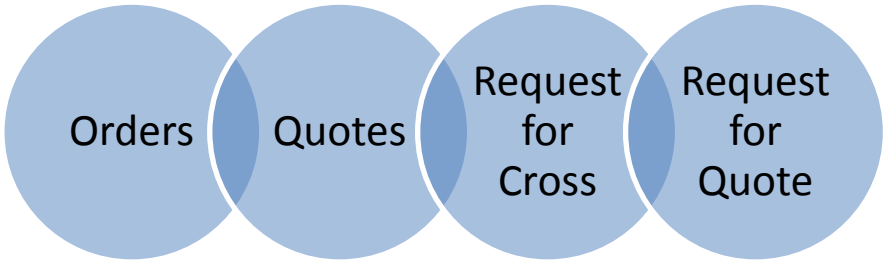
The Trading System provides sophisticated and rich trade matching functionalities including Implied Order generation with efficient execution of a broad range of hedge, strategy and contingent trades.

Market partcipants which have been configured as Users in the Trading System (Section 2.3), will be able to submit and manage Orders (including Quotes) through the FIX Order entry interface. All Orders (including Quotes) accepted by the Trading System are firm and made available for execution after going through market integrity controls to ensure fair and efficient markets. Orders (including Quotes) are maintained in Single Order Books and ranked and matched according to the trade match algorithm for each product. Quotes are not permitted in Combination Order Books.

The trading platform supports the following functionalities:

- Order—a bid or an offer which may have include time in force conditions or triggers which qualify Orders. See Chapter IV, Section 4 for Order types.
- Quote—a one or two-sided bid and offer message packet which is replaced with a new Quote. Only one active Quote packet can exist per Instrument series per trading participant (up to twenty-four bids and offers may be contained in one Quote packet).
- Request for Quote (RFQ)—an indication of intent to buy or sell a specified quantity of a Contract used to invite participants into a bidding process for specific products. Market participants who wish to trade an Instrument which may not be particularly liquid use RFQ functionality to request a price from the market and broadcast an interest in trading a particular Instrument.
- Request for Cross (RFC)—an indication of interest submitted by a single party for a two-sided Limit Order at the same price and quantity. Crossing Order functionality provides customers submitting Cross Orders the best available price with optimal market transparency.

The Order and Quote interfaces share the same FIX architecture and will not be advantaged or disadvantaged using one type or the other.



More details around CLOB trading can be found in this Reference Guide at Chapter 3.

2.1.2 Off-Order Book Trade Reporting ("Off-Exchange Trades")

The Trading System supports Real-Time trade reporting of privately negotiated transactions (brokered transactions) executed away from the Order Book.

- A Block Trade is a privately negotiated futures, options or combination transaction in a Futures Contract or Option that are listed on the Exchange. Block Trades are permitted in specified products and are subject to minimum transaction size requirements which vary according to the product, the type of transaction and the time of execution. Block Trades may be executed at any time at a fair and reasonable price. NFX will support Block Trades electronically submitted by voice brokers as well as principle-to-principle transactions.

- Brokered trades of any size may also be submitted to NFX as an Exchange for Related Position (EFRP). Each EFRP trade must be labeled with the appropriate EFRP type (i.e. EFP, EFR or EOO) on the trade report submission. EFRP trade eligibility will be notated on each individual product specification for products in which the Exchange will accept EFRP trades. The Exchange accepts the following:

    - Exchange for Physical (EFP) - A privately negotiated and simultaneous exchange of an Exchange futures position for a corresponding cash position.

    - Exchange for Risk (EFR) - A privately negotiated and simultaneous exchange of an Exchange futures position for a corresponding OTC swap or other OTC Instrument.

    - Exchange of Options for Options (EOO) - A privately negotiated and simultaneous exchange of an Exchange option position for a corresponding OTC option position or other OTC Instrument with similar characteristics.

More information concerning trade reporting are located in the NFX Rule Book at Chapter IV, Sections 11 and 12 as well as in Off-Exchange Transaction Reference Guide.

2.2 Instrument Structure

Instruments available for trading consist of standardized Futures and Options on Futures Contracts. Each Instrument can be traded and as an outright Instrument for purchase or sale, or as part of a Combination Order (strategy), namely the simultaneous purchase or sale of two, but no more than four, Instruments (respective legs). The Exchange may list Futures and or Options combinations for trading, and users may create custom Combinations Orders ("Tailor-Made Combination" or "TMC") for Futures and/or Options which are not already defined in the Order Book. Market participants can place working GTD Combination Orders that, if matched, simultaneously trade the referenced single leg Instruments according to the specified strategy without execution risk. Once created intra-day, a TMC Order Book is visible to the entire market for the remainder of the trading day.

Standard Combinations which will be pre-defined in the Trading System for Futures and/or Options will be comprised of the most liquid Intra-Commodity (e.g., NFX WTI Crude Oil Financial Futures: March versus June contract) and Inter-Commodity combinations (e.g., NFX WTI Crude Oil Financial Futures versus NFX RBOB Gasoline Financial Futures versus NFX Heating Oil Financial Futures "Crack Spread"). See Section 3.10 of this Reference Guide for further discussion on Combination Orders (strategies). Implied Out and Implied In Order functionality are also supported on the Exchange. Whereas Combination Orders specify a quantity and indicate whether those Orders are buying or selling the combination upfront, Implied orders are automatic Orders generated by the Trading System for the purpose of trading various combinations. See also the Combination and Implied Orders Technical Reference Document.

Each Futures Contract will reference detail in its contract specifications description the underlying asset or Instrument, contract size, ticker symbol, monthly contract listings, trading hours, minimum trading price intervals, Daily Settlement Price, last trading day, final settlement date and the final settlement price.

Each Options Contract will reference detail in its contract specifications description the underlying asset or Instrument, strike price, contract size, ticker symbol, monthly contract listings, trading hours, minimum trading price intervals, Daily Settlement Price and last trading day. Call and Put Options will be offered for trading.

- **Call Options**: Purchaser has the right (but not the obligation) to buy the underlying Futures Contract at the strike price (receive a long Futures Contract). Seller has the obligation to sell the underlying Futures Contract at the strike price (deliver a short Futures Contract). The purchaser and seller may, at any time prior to the exercise or expiration of the Option, enter into a closing transaction.

- **Put Options**: Purchaser has the right (but not the obligation) to sell the underlying Futures Contract at the strike price (receive a short Futures Contract). Seller has the obligation to buy the underlying Futures Contract at the strike price (deliver a long Futures Contract). The purchaser and seller may, at any time prior to the exercise or expiration of the Option, enter into a closing transaction.

  Options Exercise Styles offered for trading are as follows:

- **American-style exercise** means the right but not the obligation to exercise and take delivery of a Futures contract on any day the underlying Futures contract is available for trading.

- **European-style exercise** means right but not the obligation to exercise and take delivery of a Futures contract on one day per contract month (Expiry) the underlying Futures contract is available for trading.

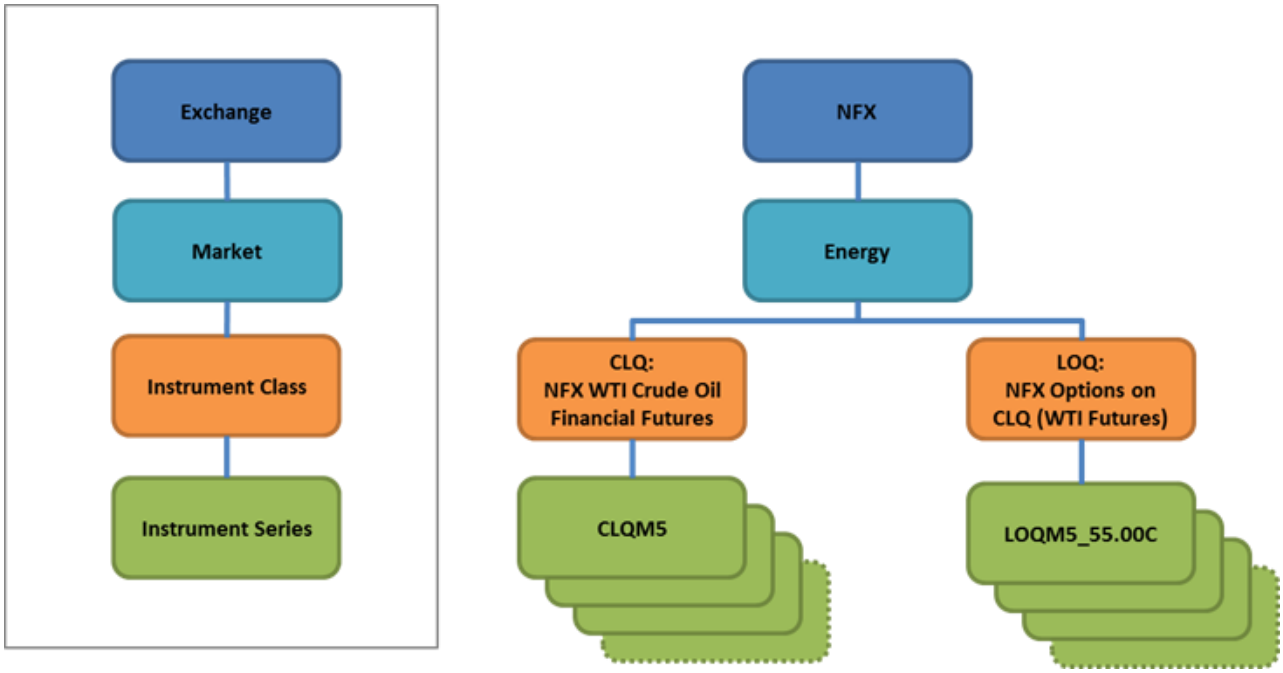
The NFX Instrument structure illustrates the Trading System hierarchy which defines the Instrument series traded on the Exchange and is described in detail below:

- **Exchange** – Nasdaq Futures, Inc. (NFX)

- **Market** – Asset class consisting of a group of products belonging to a given economic sector or market segment.

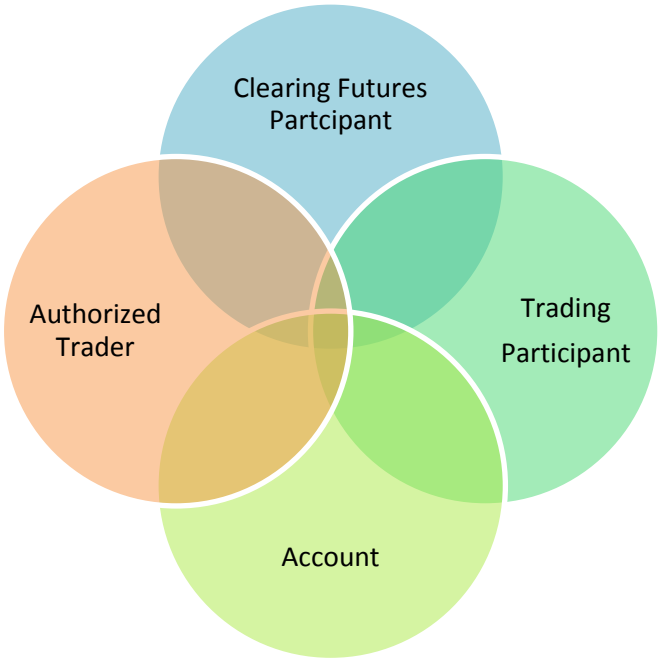
- **Instrument Class** – A Futures or Option product is an Instrument class. For example, the NFX Crude Oil Futures product (NFX WTI Crude Oil Financial Futures (CLQ)) includes each outright contract representing a different expiration month and combination Instruments representing the buying and selling of combinations of expiration months. The Crude Oil options product (NFX Options on NFX WTI Crude Oil Financial Futures (LOQ)) includes all outright contracts representing different expiration months and different strike prices and combination Instruments representing the buying and selling of Combination Orders of expiration months and different strike prices.

- **Instrument Series** – represents the individual monthly Expiry contracts on which Orders and Quote are submitted and filled.



2.3 Relational Model

The Relational Model reflects the manner in which market participants are identified in the trading platform as well as the organization of their identifiers and characteristics. The core components in the trading platform are Clearing Futures Participant, Futures Participant, Account, Authorized Traders and Authorized Customer.



2.3.1 Clearing Futures Participant

An Exchange Participant that is also a member of OCC and guarantees such trades, assuming financial responsibility for trades executed on the Exchange. A Clearing Futures Participant can elect to sponsor a Participant or non-Participant for Direct Access to the Trading System. All Futures Clearing Merchants or "FCMs" must be members of OCC.

2.3.2 Trading Participant

A Trading Participant submitting Orders into the Trading System shall be an entity. Orders may be submitted for itself or on behalf of a Customer.

Each Participant will be assigned, by the Exchange, one or several unique identification codes, known as Participant IDs. Authorized Traders of Participants will be assigned Trader IDs.

The following categories of Trading Participants may trade on NFX:

- **Clearing Futures Participant**—an Exchange Participant that clears trades at OCC and may elect to sponsor other Futures Participants, non-Futures Participants and/or Authorized Customers for Direct Access to the Trading.

- **Futures Participant**—an Exchange Participant that clears trades through a Clearing Futures Participant and may elect to sponsor other Futures Participants, non-Futures Participants and/or Authorized Customers for Direct Access to the Trading System.

- **Authorized Customer**—an individual person or entity that is granted Direct Access may directly access the Trading System, upon approval by the Exchange.

All Trading Participants are subject to Pre-Trade Risk controls. See the NFX Rulebook at Chapter IV, Section 7; Chapter V, Section 4; and the TradeGuard PTRM Reference Guide.

2.3.3 Account

Each Trading Participant must maintain at least one account with the Exchange. An account is a mandatory information field for all Orders, and each account will need to be registered in the Trading System, and the information will be verified at order entry.

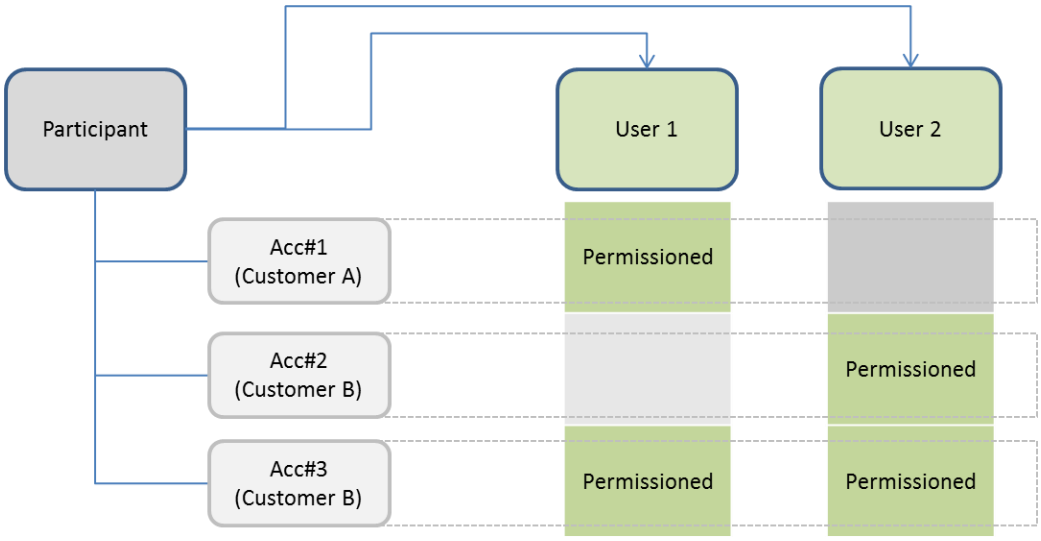
2.3.4 Authorized Trader

The Exchange requires that each trader that physically submits an Order to the Trading System through the FIX interface be identified by a unique ID -an Authorized Trader ID (using Party Role 12= Executing Trader as outlined in the Exchange FIX specification).

A Participant accessing the Trading System will be assigned one or many unique User IDs as basis for login to the Trading System. The User ID issued by the Exchange will also be used for populating Tag 50 (SenderSubID) of the Exchange FIX specification.

There can be multiple traders accessing the Trading System via one individual User ID as long as the necessary tags identifying the Authorized Trader IDs are included.

The Trading System supports verification of specific access to one or multiple Accounts. Each User ID will be assigned access rights to a specific set of accounts registered in the Trading System.



2.4 Trading System Access

Participants and Users may participate in either Direct Access or Indirect Access in the following ways:

- "Direct Access" shall mean connecting directly to the Exchange, whereby Orders do not pass through the order management system ("OMS") of a Futures Participant.

- "Indirect Access" shall mean utilizing an approved and authorized Independent Software Vendor ("ISV") and/or utilizing an OMS owned and/or controlled by a Futures Participant to access the Exchange's Trading System. A Futures Participant or Authorized Customer that accesses the Trading System by such Indirect Access is subject to all of the Rules of the Exchange, including, without limitation, use of a Trader ID, audit trail requirements and the requirement that any such Futures Participant or Authorized Customer be guaranteed by a Clearing Futures Participant. Connectivity to the Trading System established by an ISV may not be used by the ISV itself for its own trading activities. Futures Participants or Authorized Customers utilizing Indirect Access shall be required to provide information.

All Authorized Customers and Authorized Traders, may access the Trading System through either Direct or Indirect Access. These market participants will be assigned Trader IDs.

Participants shall establish trading arrangements such that each Authorized Customer or Authorized Trader is able to meet the requirements in the Exchange Rulebook and all other relevant obligations contained in CFTC Regulations and Exchange Rules.

2.5 Designated Representatives

Each Clearing Futures Participant shall assign Authorized Traders an Authorized Trader ID in a form and manner as prescribed by the Exchange. Each Clearing Futures Participant and Participant shall designate

representatives, including an Executive Representative (a designated executive representative of a Futures Participant who shall represent and act for the Futures Participant in all the affairs of the Exchange) and an Authorized Risk Officer (an authorized employee or agent of a Clearing Futures Participant who is authorized to set or change Pre-Trade risk management parameters).

Clearing Futures Participants and Futures Participants must immediately notify the Exchange of any change to its Executive Representative or Authorized Risk Officer(s) by contacting Nasdaq Futures Membership at + 1 215 495 5322 or emailing at membership@nasdaq.com.

2.6 Risk Management Services

The Exchange provides the following Risk Management services:

- TradeGuard – pre-execution control limits on Futures and Options;
- Kill Switch - Mass Cancellation of Orders at the Account level;
- Drop Copy - application messages on a separate session for risk management purposes; and
- Cancel on Disconnect - functionality that cancels all resting Orders in the event of a disconnect.

These services are further described below.

2.6.1 Trade Guard - Pre-Trade Risk Management (PTRM)

The Exchange provides Participants with the ability to facilitate volumetric Pre-Trade protection on the Trading System via TradeGuard as a complementary service. Pre-Trade risk services encompass On-Exchange Orders and Off-Exchange trades submitted via FIX. It provides an overview of the PTRM system's functionality as well as detailed descriptions of each risk check, including the manner in which it is configured, maintained and monitored.

TradeGuard is centered on the establishment of a Pre-Trade Limits Group (PTLG), which is comprised of a single account or a group of accounts connected to the same Participant ID. A PTLG can therefore encompass the entire Order flow of a Participant or simply Orders submitted by a single account or a group of accounts. A PTLG may only be connected to one Participant ID and an account may only be associated with one PTLG. PTLGs may consist of either accounts or User IDs, but not both.

Active risk checks and their limits are configured per PTLG, as described below. It is not possible to create and activate a PTLG intra-day nor is it possible to add or remove accounts from a PTLG intra-day (any intra-day change request will be held for overnight processing).

All risk checks, except the maximum order/second rate, are configurable per Instrument Type or class level referred to by a Futures or Options product. Each Futures and Option product will have its own set of risk limits (e.g., NFX WTI Crude Oil Financial Futures (CLQ) or NFX Options on NFX Brent Crude Financial Futures (BCQ)). See Section 2.2 of this Reference Guide on Instrument Structure for additional information on Instrument hierarchy.

The PTRM service provides the following risk checks:

1. Maximum Order Volume or Quantity per PTLG, Product, and Combination;
2. Daily Total Net Buy Checks (Traded Net + Open Buy Orders) per PTLG and Product; and
3. Daily Total Net Sell Checks (Traded Net + Open Sell Orders) per PTLG and Product.

In addition, the following Order controls may be applied:

1. Order Rate Checks per PTLG;
2. PTLG defined Trading Restrictions (per symbol);
3. Manual blocking of Order flow per PTLG;
4. Mass Cancellation of open Orders per PTLG;
5. Automatic blocking of Order flow at drop copy disconnect safeguard;
6. TradeGuard provides an easy to use and comprehensive GUI for configuration, monitoring, and management of the risk limits and controls;
7. Notifications via e-mail for risk limit notification and warning levels; and
8. User Interface (UI) for administering risk limits, Users and e-mail alerts, view risk checks consumption, mass cancel Orders and block Order flow.

A PTRM Reference Guide is posted on the Exchange's website.

2.6.2 Kill Switch

TradeGuard provides the ability for Participants to quickly and easily cancel all active, open Orders (including Quotes) for a PTLG. This can be done using the Mass Cancel functionality via the TradeGuard User interface (UI) or API. Once a Mass Cancellation has been executed, previously active Orders for the effected PTLG will need to be re-entered.

2.6.3 Drop Copy

The Drop Copy service allows Participants to receive real-time copies of execution report and acknowledgement messages as they are sent from the Trading System on a separate, dedicated path.

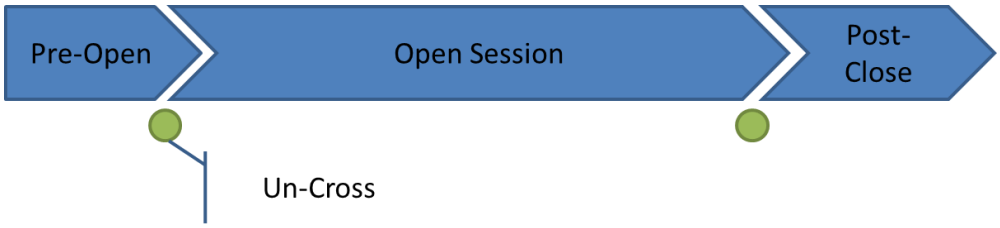
TradeGuard offers a drop copy disconnect safeguard for Participants called Automatic Block at Drop Copy Disconnect Safeguard. This safeguard monitors for lost drop copy connections, which if detected, generates an event to block all PTLGs associated with the effected User as if they were blocked manually. New Orders may not be entered if blocked. NFX Market Operations must manually unblock affected to reactivate the monitored User.

3TRADING ON THE EXCHANGE

This section provides an introduction to the Exchange trading day. The trading day is comprised of standard Trading System session states, various ways to participate in each session, and risk management and limits during those sessions. When all sessions have terminated, no Orders or Quotes will be accepted by the Trading System.

The following outlines components of a trading day. Please consult product specifications for trading hours per product.

A trading day is divided into four sessions (times are EPT):



- Pre-Open Session Commences – 18:45 (Closes at 19:00)
- Open Session Commences – 19:00 (Closes at 17:00 the next trading day)
- Close Session Commences – 17:00 (Closes at 17:00)
- Post-Close Session Commences – 17:00 (Closes at 17:30)

3.1 Pre-Open Session

To commence the Pre-Open Session, a market message is sent out to all Participants subscribed to Market Data indicating the start of the Pre-Open Session.

During the Pre-Open Session, Authorized Traders may enter Orders (including Quotes) which may be modified and canceled during the session. Orders will be time-stamped and queued until the end of the Pre-Open Session. During the Pre-Open Session, pre-existing Good-till-Cancelled (GTC) and Good-for-Day (DAY) Orders may be modified or canceled. Market Orders and Cross Orders will not be accepted during the Pre-Open Session. Any Order with a Time in Force Condition of FOK or IOC would also be rejected during the Pre-Open Session. See Chapter IV, Section 3 of the Rulebook for Order types and Time in Force Conditions.

Orders submitted during the Pre-Open Session shall remain in the Order Book unmatched until the Uncross occurs at the beginning of the Open Session. During the Pre-Open Session, the market is transparent; all submitted and /or modified Orders with associated volume are disseminated to subscribers of market data. Implied Orders are not calculated or disseminated during the Pre-Open Session.

An Equilibrium Price, the price at which the most quantity will execute with the lowest imbalance, is calculated and disseminated after every Order Book update throughout the Pre-Open Session. Specifically, the equilibrium Price is the price at which the lowest imbalance will execute with the most quantity, at a price closest to: (i) the last price; (ii) the prior day's Daily Settlement Price; or (iii) a price determined by NFX Market Operations. The Equilibrium Price includes Limit Orders, and Quotes, but will exclude Market Order, Market-to–Limit Order, Stop, Stop Limit Orders, Implied Orders, Immediate or Cancel Orders, and Fill or Kill Orders.

See Section 5 of this Reference Guide for further discussion of Order types and Time in Force Conditions.

All Orders will be disclosed to Participants with their actual price during the Pre-Open Session and a crossed Order Book will be disseminated. Order information will be available as Market-by-Order (MBO) information via the Nasdaq ITCH Market Data feed (see technical specifications on the Exchange's website). MBO information enables Participants to see individual Orders in the Order Book. The Exchange will disclose the full market depth at Order price level over ITCH. MBO information enables Participants to see aggregated volume and price for each price level.

Table 2 Example: Schedule for a Futures Contract Pre-Open Session with Open at 19:00 Eastern US Prevailing Time

Attribute	Pre-Open Session	Uncross
	18:45-19:00	19:00
Order Management	Order Management Order Entry: Limit, Market and Stop Orders with associated valid Time in Force Conditions DAY, GTC, GTD, and IOC. Quotes with valid Time in Force Conditions GFD. Volume and Limit Price will be displayed	
Auto Matching	No	Uncross Algorithm
Equilibrium Price	Equilibrium Price (EP) calculated and disseminated at every update. Crossed Orders are matched on Order Book at Uncross. EP at Uncross disseminated as Opening Price.	No
ITCH Market Data	Anonymous Market-by-Order; quantity and price of all added, updated and removed Orders/Quotes. EP and associated quantities	Anonymous Market-by-Order; quantity and price of all added, updated, removed, and executed Orders/Quotes.

3.2 The Uncross

During the Pre-Open Session, a two sided auction is organized, where Orders entered during the Pre-Open Session on both sides of the Order Book are uncrossed automatically, at the Equilibrium Price at the conclusion of the Pre-Open Session. Before the Uncross is performed, a check is made for whether or not it is needed (i.e. if there are any crossed prices). If the Uncross is not required, the Open Session will commence and establish the Best Bid and Offer (BBO). The Trading System will automatically match all crossed Orders at the Equilibrium Price. The Open Session will commence and the opening price will be either: (i) the Equilibrium Price; or (ii) the first match in the Trading Session. During the Open Session, the Trading System will match Orders (which includes Quotes).

The Equilibrium Price is the price at which the most quantity will execute with the lowest imbalance. Accordingly, following the Uncross, there are no crossed prices left in the Order Book. Executions at the Uncross are labelled as such in the ITCH Market Data protocols.

The Equilibrium Price includes the following Order Types:

- Limit Orders; and
- Quotes.

The following are excluded from the calculation of the Equilibrium Price:

- Market Orders;
- Market-to-Limit Orders;
- Stop Orders;
- Stop Limit Orders;
- Implied Orders;
- Immediate or Cancel Orders; and
- Fill or Kill Orders.

The following methodology is used to calculate Equilibrium Price:

- **Maximize Executed Quantity** – subject to the following, the Equilibrium Price shall be the price at which the execution of most quantity will occur.
- **Minimize Surplus Quantity** – if there is more than one price at which the most Orders will be executed, then, subject to the following, the Equilibrium Price will be the price which would generate the lowest imbalance.
- **Choose Price Closest to Reference Price** – if there is more than one price which would be determined by market pressure, the Equilibrium Price shall be the price closest to the Reference Price (a Reference Price can be: (i) the last price; (ii) previous day's settlement price; or (iii) price set manually by NFX Market Operations).

Note: It is possible to calculate the Equilibrium Prices in Combination Order Books, based on Combination Orders entered directly into the Combination Order Book. This is determined in the same way as Equilibrium Price calculations for the Single Order Book with one exception; instead of the price closest to a Reference Price being selected for the Equilibrium Price, the average of the highest and lowest eligible price is chosen as Equilibrium Price.

Any Cross Order matched at the Equilibrium Price will sets the open price in the Open Session. The Order Book then moves from no-matching during the Pre-Open Session to automated matching during the Open Session.

At the end of the Pre-Open Session, the System will remove unmatched or partially matched orders placed during the Pre-Open Session with Time-In-Force set to Immediate or Cancel. Partially matched Market-to-Limit Orders with Time in Force Conditions set to DAY, GTD or GTC are converted to Limit Orders with price equal to the Equilibrium Price. If trigger conditions are met by the Uncross, Stop Orders are triggered and executed. Stop Orders can be triggered by the Equilibrium Price, but do not contribute to the calculation of the Equilibrium Price.

Once the Uncross is complete in the respective leg markets, the Combination Order Books are Uncrossed at their respective Equilibrium Price. Immediately following the Uncross of Combination Orders, Implied Orders are activated for the Open Session derived from the best bid and/or best offer of its respective legs. However, the Trading System will not generate Implied Orders for Inter-Commodity Combination Orders in the Open Session or any other session.

3.3 Open Trading Session – Automatic (Continuous) Matching

Ranking for all Orders entered prior to the Uncross and during automatic matching are based on a Price-Time execution algorithm. Matches are allocated based on price and then time, for Price-Time Priority. Orders (with Time in Force Conditions GTC and GTD) entered prior to the current trading day will retain priority. Orders in the Order Book will be matched according utilizing the Price-Time execution algorithm unless otherwise specified in the product specifications.

Table 3 Example Schedule for Exchange Open and Close for Futures

	Open Session	Post Close Session
	19:00-17:00	17:00-17:30
Order Management	Unexecuted Limit and Stop Orders with Time in Force Conditions DAY, GTC and GTD following the Uncross enter continuous market, IOC Orders are cancelled. Unexecuted Quotes with Time in Force Conditions Day enter continuous market. Order entry, Quoting, Cancel and Cancel/Replace allowed. Orders are disseminated. Off Order Book Trade Reporting occurs.	Unexecuted Limit Order, GTC, GTD, can be amended or deleted. GTC, GTD Orders are entered back into the market at Pre Open Session of next Trade Day. Order Cancel messages sent.
Auto Matching	Yes	No
Equilibrium Data	No	No
ITCH Market Data	Anonymous Market-by-Order; quantity and price of all added, updated, executed and removed Orders/Quotes.	No, Market-by-Order.
Auxiliary Multicast Market Data	Off Order Book trades, cancel trades, RFQs, and settlement prices.	

3.3.1 Automatic Order Matching

Resting buy or sell Orders entered into the Order Book are matched against a corresponding incoming buy or sell Order in the Order Book, to create a matched trade. Each incoming Order is immediately checked for execution against resting Orders on the opposite side of the Order Book. Orders can be executed in full or in part in one or more steps. Buy Orders submitted into the Order Book with a buy price higher or equal to the sell Order with the lowest price (crossing prices), will be matched into one or more trades depending on the volume of the incoming Order and the volume and the price of the resting sell Order(s). The match price is determined by the price of the resting Order in the Order Book. The matching process will attempt to fill as much as possible of the volume of the incoming sell or buy Order until the limit of the crossing prices is passed.

3.3.2 Matching Priority for Products

Orders entered in the Order Book will be matched according to the Futures product rules.

3.3.2.1 Price, Time /Pro Rata Priority Algorithm Definition

NFX will support Price-Time and Size Pro -Rata Priority allocations based on the product (contained in product specifications). The Price-Time algorithms utilized will not prioritize by Participant.

All Orders and/or Quotes are publicly disseminated during the Open Session. Order information will be available as Market-by-Order (MBO) information via ITCH. MBO information enables Participants to see each individual Order in an Order Book. The Exchange will disseminate full depth of Orders via ITCH. All Orders and matched Trades are disseminated as real-time market data. All matches are anonymous and therefore counterparty information is not published.

It is important to note that an Order loses priority when modified in any of the following ways:

- increase in quantity; or
- change in price.

3.4 Close Session

At the end of the Open Session the Trading System will no longer accept Orders and no matching will occur. GTC and GTD Orders will remain in the Order Book.

3.5 Post Close Session

At the end of the Close Session, a Post Close Session will commence. During the Post Close Session, Futures Participants may modify and cancel Orders. New Orders cannot be submitted during the Post-Close Session. At the end of the Post-Close Session, Order management ceases and the Trading System will close. No new Orders will be accepted at this time. During the Post Close Session all Order updates are disseminated only to the respective Authorized Trader (Order information is not available via ITCH or FIX).

Table 4 Example Schedule for Futures Post Close

	Exchange Close	Post Close Session
	17:00	17:00-17:30
Order Management	Auto-matching ceases. DAY Orders and Quotes automatically cleared from the Order Book.	GTC and GTD Orders in the Order Book can be modified and cancelled.
Auto Matching	No	No
Equilibrium Data	No	No

3.6 Trading Halts and Restoration of Trading

Trading may be suspended by NFX Exchange Operations either for technical, regulatory, or emergency reasons, pursuant to Exchange Rules. The Exchange shall provide Participants with information on trading halts and the subsequent restoration of trading will be disseminated via an Exchange notice or any other method that the Exchange deems appropriate.

Specifically, the Exchange will halt trading in all Contracts subject to NFX Rules at Chapter IV, Section 13 and shall not reopen trading in those Contracts until trading in the Contracts may be resumed when the interests of a fair and orderly market are best served by a resumption of trading. When a halt is initiated, the Trading System will complete the processing of trades that are in the course of being processed by the Trading System prior to the start of such a halt period, and reject all other Orders. The Exchange will issue a notification to the market of a halt. Once the halt is initiated, any new Orders, Quotes, cancellations or Order modifications submitted to the Trading System will be automatically rejected by the Trading System. The Exchange will issue a notification indicating the commencement of trading and conclusion of the Trading Halt. Trading will commence with an Open Session which will follow a Pre-Open Session after a halt.

3.7 Quotes

Quotes are similar to Orders, but with the following additional characteristics:

- A special FIX message is used for entering and replacing Quotes (streaming Quotes).
- Quotes can be single-sided or two-sided, i.e. both the bid and ask side can be provided in one message packet.
- A Quote can be replaced by a new Quote in the same Order Book (although it is possible to replace only one side with the other side retaining its priority). This is done in an atomic manner to enable market makers to provide continuous quotes.
- All Quotes are assumed to be valid until end of day (or until canceled or replaced).
- Only one active Quote packet can exist per Instrument series per trading participant (up to twenty-four bids and offers may be contained in one Quote packet).
- Quotes may only be submitted into Single Order Books.
- Quotes may not be submitted into Combination Order Books.

Quotes are firm, and will automatically be matched when executable against other Orders and Quotes.

In order to keep the Quote message as small as possible, it does not include any account information (FIX Tag 1 of the Order specification). Each User will have a pre-defined account as the Quote account and all trades will be associated to that account after execution for transmission to OCC for clearing.

3.8 Request for Quote (RFQ)

The execution of a RFQ is supported for all NFX Products. An RFQ is a Trading System broadcast message initiated by an Authorized Trader requesting an indication to buy or sell a specified quantity of a Contract. An RFQ must specify whether it is a buy or sell Order and the quantity interest in a Contract. The initiator of an RFQ can specify an Expiry (Delivery Month) or Combination Order (Strategy that is pre-defined or

customized (TMC)). An RFQ is sent to all Participants anonymously. A RFQ is not an Order. When an RFQ is published, responding Participants may enter or update their Quotes or Orders in the Order Book in response to the RFQ.

3.9 Pre-Negotiated / Cross Transactions

The execution of pre-negotiated cross transactions is supported for all NFX Products. Participants and Users can submit pre-negotiated, two-sided Cross Orders to the Exchange for execution. However, prior to execution, the Cross Order transaction must interact with any available liquidity in the Order Book prior to any volume being crossed. A Request for Cross (RFC) which is an RFQ must be entered before the Cross Order can be submitted.

All Cross Order transactions must follow the following rules and procedures prior to execution:

- Cross Orders can contain only a two-sided buy Order at the same price and quanity. Multi-legged transactions will be rejected (i.e. buy 50, buy 50 and sell 100).
- The Cross Order will interact will all existing Order types at the Cross Order price (i.e. crossing price) prior to any volume being crossed (including Implied and Iceberg Orders). If the crossing price is at or outside the best bid and/or offer (BBO) in the Order Book, it shall trade against existing Orders in the Order Book.
- If the quantity in the crossing transaction is larger than the aggregated Order quantity in the Order Book at the crossing price, then the crossing transaction will trade partially with the Order Book, and the residual crossing quantity will trade against itself (remaining volume that was not crossed will be cancelled from the Order Book).
- If no Order exist in the Order Book (i.e. there is no BBO), then the crossing transaction will trade fully against itself.
- The crossing transaction will interact with all Order types in their entirety prior to any volume being crossed according to the execution alogorithm (e.g., price then time). If the crossing transaction interacts with hidden or non-displayed volume, such as an Iceberg,the non-displayed portion of the Order which becomes displayed after the original portion is executed will be equal to the original non-displayed quantity. Only if the volume is reduced for an Iceberg Order will it retain its position in the time-priority queue.

Cross Order transactions that are submitted by Participants and/or Users that are not properly configured for both the RFC and Cross Order functionality will be rejected. Cross Orders will not be accepted during the Pre-Open Session. See NFX Rulebook at Chapter V, Section 11.

3.10 Strategies – Combination Orders

The Trading System supports the trading of Strategies also referred to as Combination Orders, which will trade in a separate Order Book. The Exchange may list Futures and/or Options combinations for trading, and users may create their own tailor made combination (TMC) for Futures and/or Options combinations not already defined in the Trading System. Market participants may submit GFD Combination Orders that,

if matched, will simultaneously trade the referenced single leg Instruments according to the specified strategy without execution risk. Combination Orders will first execute against respective legs of Orders before executing against other Combination Orders within the Combination Order Book. Once created intraday, a TMC Order Book is visible to the entire market and lives throughout the trading day. Quotes are not permitted in Combination Order Books, only Orders are permitted.

Representative types of Combination Orders accepted by the Trading System, which may be comprised of a minimum of two, but not exceed four, legs are as follows:

- **Buy and Write (a.k.a. Covered Call)** – Buy a Futures Contract, and write call Options.
- **Call (Put) Spreads** – Buy and sell two call (put) Options of the same underlying and expiration but with different strikes.
- **Calendar (Horizontal) Spreads** – Buy and sell two call (put) Options of the same underlying and strike, but with different expirations.
- **Straddles** – Buy a call Option and a put Option of the same underlying, expiration and strike.
- **Strangles** – Buy a call Option and a put Option of the same underlying and expiration, but with different strikes.
- **Conversion** – Sell a call Option and buy a put Option of the same underlying, expiration and strike at the same time as buying the underlying, or an underlying Future.
- **Reversal** - Buy a call Option and sell a put Option of the same underlying, expiration and strike at the same time as selling the underlying short, or selling an underlying Future.
- **Butterfly Spread** – A Contract strategy consisting of three legs either for Futures or Options. Butterfly Option Spreads consist of three put and/or call Contracts. Butterfly Futures Spreads consist of three Contracts.
- **Condor and Iron Condor Spreads** – A Contract strategy consisting of four legs. Condor Options Spreads consist of four Options Contracts (all put or all callContracts). Condor Futures Spreads consist of four Futures Contracts. Iron Condor Options Spreads consist of four Options Contracts (two put and two call Contracts).
- **Intra-Commodity (Time) Spread** – Combinations may be formed by buying and selling two Futures of the same underlying, but with different expirations. Combinations may be formed by two different Future Expiries (NFX WTI Crude Oil Financial Futures, March versus June contract).
    - The price ratio for the underlying legs will be configured to an integer of one. There will be no change to the trading tick size.
- **Inter-Commodity Spread** – Combinations may be formed of two or three different underlying Futures Contracts (NFX WTI Crude Oil Financial Futures versus NFX RBOB Gasoline Financial Futures versus NFX Heating Oil Financial Futures ”Crack Spread”).
    - The price ratio for the underlying legs will be configured to an integer of less than one, but rounded to four decimal places to the right from an initial calculation of fourteen places. Accordingly, the minimum price interval for a respective leg price is one hundredth of a cent ($0.0001) versus its outright leg trading tick which may be 0.01.

3.11 Implied Orders

The Exchange offers Implied Out and Implied In Order functionality. Whereas Combination Orders specify a quantity and whether they are buying or selling the combination upfront, Implied Orders are automatic orders generated by the Trading System for the purpose of trading various combinations, except for Inter-Commodity Spreads. An Implied Order cannot be an FOK or IOC.

Implied Out Orders are calculated and inserted into the single Order Book legs. Implied Out Orders advertise the liquidity available in the marketplace due to the Combination Orders, and increase the possibility of executing Combination (Strategy) Orders. Implied Out Orders are generated only during automatic matching (the Open Session). Implied Out Order dissemination is via ITCH Market Data, except for Inter-Commodity Spreads.

The Exchange offers Implied In Order functionality, which derives it price and quantity from the net differential from the best prices as between two contract months for a Contract). The Exchange will not disseminate these Orders via ITCH Market Data. Consequently the Participants and Users will need to calculate their own (deterministic) set of Implied In Orders locally (e.g. via ISV or proprietary graphical user interface). Implied In Orders are generated only during automatic matching (the Open Session).

A Combination & Implied Orders Technical Reference Document is posted on the Exchange's website.

3.12 Trade at Settlement

The Exchange may determine from time-to-time those Contracts and contract months for which Futures Participants may execute trades at the Daily Settlement Price ("Trade at Settlement" or "TAS") and the trading hours of each contract during which Members may execute trades at the Daily Settlement Price (Daily Settlement Price first announced by the Exchange for the trade date on which the TAS Order is executed).

The Exchange may also designate Contracts and contract months where Futures Participants may execute trades at a premium or discount to the Daily Settlement Price. When designating such Contracts and contract months the Exchange may limit the permissible trading range around the Daily Settlement Price within which trades may be executed. The Exchange may vary this trading range at any time with immediate effect. TAS trades are executed on the NFX Platform at a price of zero representing the Daily Settlement Price.

For those Contracts and contract months where it is permitted to trade at a premium or discount to the Daily Settlement Price, the price of such settlement trades will be prefixed by a plus or minus sign as appropriate. For example, settlement trades executed at +1 cent will be at a premium of one cent to the settlement price while those executed at -1 cent will be at a discount of one cent to the settlement price.

After the Exchange has determined the Daily Settlement Prices of the associated underlying Futures contracts; the Exchange shall enter a reversing trade (to offset the exact initial trade at settlement

transaction) and then an overtaking trade that is equal to the sum of the initial trade at settlement trade and the Daily Settlement Price for the relevant underlying Futures contract. Only the overtaking trade will be sent to OCC for clearing.

3.13 Trade Cancellations

The Exchange price limit system is designed to prevent the submission of Orders with significant pricing errors, and eliminate the need for manual intervention by an NFX Official to invalidate a particular trade. However, in some circumstances an NFX Official may conclude that a trade has been executed at an errant price and will cancel the trade pursuant to Exchange Rules.

Fair value may be determined by observing bids, offers, and trades that were entered into the relevant product, in either the same or neighboring Expiries, before and after the trade in question. When a trade is cancelled the counterparties to the trade will be informed as soon as possible by telephone and by a broadcast message from the Trading System. Also see additional guidance about trade cancellations in the Error Trade Policy Reference Guide.

3.14 Order Price Limit Protection

In order to prevent erroneous transactions that might occur due to fat finger pricing or manifest errors, NFX will implement the price limit structure described below.

There are no price limits during the Pre-Open Session and the Uncross. However, throughout the Open Session, Price Limits for all products will be calculated from a Reference Price within the same margin allowed above and below the Reference Price. The Exchange will set the applicable price margin above and below the Reference Price for each Contract.

The Reference Price is based on the logic detailed below:
During the Pre-Open Session, Price Limits will not be activated.
During the Open Session, the Reference Price for a product is defined as:

1. If the bid is greater than the last updated Reference Price then the bid shall be the Reference Price. If the ask is less than the last updated Reference Price then the ask shall be the Reference Price. Finally, if there exists a Reference Price then the last updated Reference Price (not the bid or ask) shall be the Reference Price.
2. If a Trade has not matched and there is no available bid/ask for the relevant contract:
    - The last traded price from the previous Trading Session following the previous Business Day's Daily Settlement Price calculation; or
    - If no such trade is available from the previous Trading Session, the Daily Settlement Price from the previous Business Day.

Both outright and Implied Orders will be disclosed to the market if they are at or within the current price limits. However, if Implied Out Orders are entered outside the price limit, they will be displayed at the

price limit. Thus, the price of an Implied bid Order shall be constrained to the upper price limit, while an Implied Offer shall be constrained to the lower price limit.

Buy Orders with prices lower than the lower price limit and sell Orders with prices above the upper Price Limit are allowed to enter the Trading System. Conversely, buy Orders with prices above the upper price limit and sell Orders with prices below the lower price limit will be rejected.

Attempts to enter Orders and Quotes during the Open Session outside the prevailing price limits for the relevant product will be rejected by the Trading System. Combination Limit Orders, Market-to-Limit Orders, and both single and strategy Market Orders are not validated against price limits. The Trading System will send a message notifying the Participant's relevant Authorized Trader of the rejection. The permitted margins above and below the Reference Price for price limit determination for each product will be set from time-to-time by the Exchange. The margins may be adjusted to reflect market conditions with the objective of preventing the execution of any Orders submitted to the Trading System with manifest pricing errors and/or at unrepresentative price levels.

Although a series of Options on a particular Future may trade frequently, any single specific Option and strike price may not trade or even be quoted regularly. Additionally, the underlying Futures contract may move significantly since the last Option transaction making the last trade and previous day's Daily Settlement Price irrelevant from a Reference Price perspective. Because of this NFX will not support Price Limits for NFX Option products. Any Option pricing inquiries, including potential erroneous transactions, should be brought to the attention of Exchange Staff immediately.

3.15 Market Makers

A Market Maker is a Participant that quotes both the buy and sell side in a given market. The main function of the Market Maker is to provide liquidity to the marketplace.

Authorized Customers and Authorized Traders may use the Mass Quote functionality to submit bid/ask pairs and generate two-sided markets for multiple Instruments during the Open Session.

Marker Maker designation is via application to the Exchange.

3.15.1 Mass Quote Function

Mass Quote functionality allows traders to create and maintain a one or two-sided market on a large number of Instruments more efficiently by enabling Authorized Traders and Authorized Customers to:

- Create and update their action to buy and sell up to 29 Instruments utilizing a single message;
- Modify only one side (bid or sell) of a resting Quote by using the appropriate bid or offer quantity and price values in a new Mass Quote entry message;
- Quote cancel is accomplished by modifying the price and quantity of a Quote to zero;
- Cancel one side of a resting quote and leave the opposite side unchanged;

- Cancel one side of a resting Quote and modify the opposite side;
- Cancel both sides of a resting Quote; and
- Cancel all Quotes entered by Authorized Traders and Authorized Customers.

3.15.2 Market Maker Protection

The Exchange offers functionality to protect Market Makers from large scale rapid-fire Quote executions that can occur in a short amount of time during periods due to extreme market volatility. This functionality is designed to enable Market Makers to quote in Contracts while determining acceptable risk levels.

Market Maker Protection parameters are configurable by the Market Maker. The Market Maker can update (change or disable) the parameters intra-day. The parameters required to be set by a Market Maker are:

1. **Exposure Limit Time Interval**—the number of contracts executed during a period of time specified in seconds per Contract.
2. **Quotation Frozen Time**— cannot enter Quotes for a period of time specified in seconds per Contract.
3. **Quantity Protection**—a volume threshold value which, if the number of contracts executed, equals or exceeds such value during the Exposure Limit Time Interval, the Trading System will remove all Group Quotes in a Contract.
4. **Delta Protection**—a net delta value per Contarct based on absolute value of the sum with (or without) Futures.

If the Market Maker's pre-set parameters have been met or exceeded in either the Quantity Protection or the Delta Protection, the Trading System will prevent new Quotes from being entered by the Group for the Quotation Frozen Time. If an execution would cause the volume threshold or the net delta value to be met or exceeded, the Trading System completes the transaction prior to the removal of all Group Quotes in a Contract. A setting of zero will result in the Quotation Frozen Time Period setting to prevent Quotes from being entered for the remainder of that Open Session, unless the setting is modified. The Quantity Protection and Delta Protection risk mechanisms operate independently of each other. The Trading System will send a notification message to the Market Maker when Quotes are removed as a result of either the Quantity Protection or Delta Protection mechanisms for a Contract.

See the Market Maker Protection & Self-Match Prevention Reference Guide.

4ORDER TYPES AND TIME CONDITIONS

4.1 Order Types

The following Order types, time-in-force and time conditions are available for all Products:

Order Types	DAY (Good-for-Day)	GTC (Good-till-Cancel)	GTD (Good-till-Date)	FOK (Fill-or-Kill)	IOC (Immediate-or-Cancel)
Market Order				X	X
Limit Order	X	X	X	X	X
Market-to-Limit Order	X	X	X	X	X
Stop Order	X	X	X	X	X
Stop Limit Order	X	X	X	X	X
Iceberg Order	X	X	X	X	X
Trading at Settlement	X				
Combination Order	X	X	X		
Implied Orders	X				
Linked Orders	X			X	X

3. Market Orders

Market Orders are accepted only during the Open Session. Market Orders are executed at the best available price and are therefore entered without a price. Note that an IOC Market Order will trade through the Order Book until the entire quantity is filled or partially filled (an FOK will only trade if the entire volume in the Order can be filled).

Given the following Order Book:

Order book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
--	11	10	10.50	11.00	10	14	-
-	12	10	10.40	11.10	10	15	-
-	13	10	10.40				-

An aggressive Market Order to Sell 20 @ MKT would execute 10 @ 10.50 with Order #11 and another 10 @ 10.40 with Order #12.

Market Orders cannot be stored in the Order Book during automatic matching, and will be canceled if they are not immediately executed.

4. Limit Order

A Limit Order must specify a price that is valid according to its minimum trading price increment and will only execute at prices equal to or greater than its specified limit price.

Given the following Order Book:

Order Book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
--	11	10	10.50	11.00	10	14	-
-	12	10	10.40	11.10	10	15	-
-	13	10	10.40				-

An aggressive Limit Order to Sell 20 @ 10.50 would execute 10 @ 10.50 with Order #11 and then would then be handled as per its specified Time-in-Force.

Limit Orders can have additional quantity and reserve conditions, which are described below in "Time Conditions."

5. Market-to-Limit Order

Market-to-Limit Orders will execute at the best possible price. If the Order is partly matched, the remainder is converted to a Limit Order priced at match price. In comparison with a normal Market Order, the Market-to-Limit Order only executes at the best price level and therefore does not trade through the Order Book.

Given the following Order Book and a tick size equal to 0.10:

Order Book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
--	11	10	10.50	11.00	10	14	-
-	12	10	10.40	11.10	10	15	-
-	13	10	10.20				-

An aggressive Market-to-Limit Order to sell 30 @ MKT would execute 10 @ 10.50 with Order #11 and the remaining balance would be stored in the Order Book at 10.50, and the resulting Order Book would reflect the following:

Order Book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
-	12	10	10.40	10.50	20	16	-
--	13	10	10.20	11.00	10	14	-
				11.10	10	15	-

All Time in Force Conditions are accepted for Market-to-Limit Orders in the Open Session. In all no-matching sessions (Pre-Open, Close and Post-Close Sessions) or auction (Uncross) during the Pre-Open Session all Time in Force Conditions are in force except for FOK Orders.

For Market-to-Limit Orders the following would apply in automatic matching:
By defining Time in Force Conditions to either be Fill-or-Kill (FOK) or Immediate or Cancel (IOC), the Market-to-Limit Order type will behave as a Market Order that only matches at one price level.

During an automatic matching session, a Market-to-Limit Order is immediately canceled if no match can be executed, e.g. if no Order exists on the opposite side of the market. Market-to-Limit Orders for a Combination Order Book will not match with the respective leg Order Books. Therefore if no Orders exist on the opposite side of the market in the Combination Order Book, the Market-to-Limit Order in the Combination Order Book is immediately canceled, since no match can be executed.

For Market-to-Limit Orders the following applies in no-matching sessions (Pre-Open, Close and Post-Close Sessions) or auction (Uncross) (Pre-Open Session):

Market-to-Limit Orders entered in a no-matching sessions (Pre-Open, Close and Post-Close Sessions) or auction (Uncross) (Pre-Open Session) are treated as Market Orders, participate in the Uncross at an Equilibrium Price and if any quantity remains after the Uncross the Order will be posted in the Order Book at the Equilibrium Price.

6. Stop Order

A Stop Order becomes a Market Order when the Price designated on the Order is triggered by a trigger condition.

Stop Orders are only active in the Order Book once the trigger condition has been met.

Consider the following Stop Order:

Order 1 Buy 10 @ MKT, Trigger last trade >= 10.50

And the following Order Book:

Order Book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
--	11	10	10.50	11.00	10	14	-
-	12	10	10.40	11.10	10	15	-
-	13	10	10.40				-

A new, "normal" Order coming into to Sell 5 @ 10.50 would result in a trade at 10.50, and the triggering of the Stop Order. The Stop Order would then execute with Order # 14 at the market price of 11.00.

Stop Orders are also supported by time conditions.

7. Stop Limit Order

When a trade has occurred at or through the stop price, the Order becomes executable and enters the market as a Limit Order at the limit price. The Order will be executed at all price levels from the stop price up to and including the limit price. If the Order is not fully executed, the remaining quantity of the Order will remain active on the Order Book at the limit price. A buy Stop Limit Order may be placed above or below the current market price. A buy Stop Limit placed below the current market becomes executable when a trade occurs at or lower than the Stop Price. A buy Stop Limit placed above the current market becomes executable when a trade occurs at or higher than the Stop Price. A sell Stop Limit Order may be placed above or below the current market price. A sell Stop Limit placed below the current market becomes executable when a trade occurs at or lower than the Stop Price. A sell Stop Limit placed above the current market becomes executable when a trade occurs at or higher than the Stop Price.

Consider the following Stop Limit Order:

Order 2: Buy 10 @ 10.90 Trigger last trade >= 10.60

And the following Order Book:

Order Book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
--	11	10	10.50	11.00	10	14	-
-	12	10	10.40	11.10	10	15	-
							-

A new, "normal" Order coming into to Sell 5 @ 10.60 matches with a new Order to Buy 5 @ 10.60 resulting in a trade at 10.60, and the triggering of the Stop Limit Order. The Stop Limit Order would be placed in the Order Book as the new best bid (it is not executable).

Order Book A							
Buy Side				Sell Side			
AON	Order Id	QTY	Price	Price	QTY	Order Id	AON
--	1	10	10.90	11.00	10	14	-
-	16	10	10.60	11.10	10	15	-
-	11	10	10.50				-
	12	10	10.40				

8. Iceberg Order

An "Iceberg Order" is an Order where a portion of the Order is displayed and a portion of the Order is non-displayed. When the displayed quantity of the Iceberg Order is executed, a non-displayed portion of the remaining balance of the Order will be displayed in the Order Book as a new Order and will not retain its time priority. The non-displayed portion of the Order which becomes displayed after the original portion is executed will be equal to the original non-displayed quantity. Only if the volume is reduced for an Iceberg Order will it retain its position in the time-priority queue.

9. Trading at Settlement Order

A "Trading at Settlement" or "TAS" Order is an Order to buy or sell a stated quantity of the relevant Contract at a price expressed as a differential (which may be zero) above or below the Daily Settlement Price for the Contract on the trading day on which the TAS Order is executed. TAS Orders may be priced in increments (plus or minus) of up to 10 minimum trading increments from the Daily Settlement Price. A TAS transaction executed at a zero differential will be filled and cleared at the Daily Settlement Price for the trading day.

10. Combination Order

A "Combination Order" means an Order to simultaneously buy and/or sell at least two contracts in one or more Contracts in a form accommodated by the Trading System. All legs of a Combination Order are acquired simultaneously and must be for the same account or accounts with the same beneficial ownership. The Exchange will accept a Combination Order of up to four legs into the Trading System. Combination Orders may execute against other Combination Orders or they may execute against the respective legs of Orders within the Order Book. Combination Orders shall not update the prices of the respective legs of such Combination Orders in their respective Order Book. The Exchange will disseminate Combination Orders through ITCH and FIX protocols. These types of Orders may also be referred to as "Strategies." Quotes are not permitted in Combination Order Books, only Orders are permitted.

11. Implied Orders

The term "Implied Orders" means Orders that are automatically generated by the Trading System from a derived price. An "Implied Out Order" derives its price and quantity from resting Combination Strategy Orders and the aggregate of the respective legs which are at the best price for a Contract. An "Implied In Order" derives it price and quantity from the net differential from the best prices as between two contract months for a Contract. The Exchange will not disseminate Implied In Orders through the ITCH Market Data Feed; it will disseminate through FIX.

12. Linked Orders

The term "Linked Orders" means consists of a single message with two or more dependent Orders with the same quantity and Time in Force Conditions for each Order. An execution of one of the Linked Orders will result in an equal reduction in the quantity of all remaining Orders which are linked to that Order. The Orders in the Linked Order message will be separately executed and will be separately reported. A cancellation or rejection which impacts one or more Orders of the Linked Order will result in the cancellation or rejection of all unexecuted Orders that are part of the Linked Order. Buy Orders and sell Orders cannot be combined in a Linked Order. A Linked Orders cannot have a Time in Force Conditions of

GTC or GTD. A Linked Order may not be a Combination Order or an Iceberg Order. A Linked Order may contain a maximum of ten (10) Orders in a single message.

4.2 Time Conditions

1. DAY "Good For Day" (DAY)

A DAY Order is valid until the Open Session closes. A Day Order is active for the Business Day and any non-executed portion will be cancelled upon the transition to the Post Close, i.e. when the Exchange closes at the end of the Open Session.

2. Good Till Cancelled (GTC)

The system supports GTC Orders in markets that have no specified limit to the maximum number of days an Order is allowed to stay in the book. A GTC Order will retain its original chronological order based on original entry time into the Trading System.

3. Good Till Date (GTD)

A GTD Order is valid until a specified date in the future, up to a maximum of 255 days. If the Order is not matched during the Business Day it will be entered into the Order Book the following Open Session. A GTD Order will retain its original chronological order based on original entry time into the Trading System.

4.3 Time-in-Force

1. Fill-or-Kill (FOK)

A FOK Order is not stored in the CLOB at any time. If a FOK Order is not executed in its entirety, the Order will be cancelled. FOK Orders may only be entered during the Open Session.

2. Immediate or Cancel (IOC)

An IOC Limit or IOC Market-to-Limit Order will match with all the resting volume on the opposite side of the Order Book, up to the limit price, and the remaining volume will be canceled. An IOC Market Order will match all available resting volume on the opposite side of the Order Book irrespective of the price, and any remaining unmatched volume of the IOC Order will be canceled.

4.4 Order Modification

With respect to Order modifications, time priority will be retained if only the volume is reduced. If the Order modification results in an increase in volume, or price modification, time priority will not be retained for that Order.

4.5 Tick Sizes

Tick size is the smallest allowed price increment for a specific product and thereby, is the smallest allowable differential between the buy and sell price in the Order Book for that product. If the price specified by a limit price is not valid according to the allowed tick sizes specified in the Rulebook for the product, the Order is rejected by the Trading System.

See NFX Rulebook Chapter IV, Section 4.

5REPORTING OF OFF-ORDER BOOK (OFF-EXCHANGE) TRADES

The Trading System supports real time trade reporting of privately negotiated transactions executed outside of the Order Book.

- A Block Trade is a privately negotiated Futures, Options or combination transaction in a Futures Contract and/or Option that is listed on the Exchange. Block trades are permitted in specified products and are subject to minimum transaction size requirements which vary according to the product, the type of transaction and the time of execution. Block trades may be executed at any time at a fair and reasonable price. Participation in Block Trades is restricted to Eligible Contract Participants as defined in the Commodity Exchange Act.

- Brokered trades of any size may also be submitted to NFX as an Exchange for Related Position (EFRP). Each EFRP trade must be labeled with the appropriate EFRP type (i.e. EFP, EFR or EOO) on the trade report submission. EFRP trade elibility will be specified for each product in which the Exchange will accept EFRP trades

    - Exchange for Physical (EFP) - A privately negotiated and simultaneous exchange of an Exchange Futures position for a corresponding cash position.

    - Exchange for Risk (EFR) - A privately negotiated and simultaneous exchange of an Exchange Futures position for a corresponding OTC swap or other OTC Instrument.

    - Exchange of Options for Options (EOO) - A privately negotiated and simultaneous exchange of an Exchange Option position for a corresponding OTC Option position or other OTC Instrument with similar characteristics.

See Off-Exchange Transaction Reference Guide posted on the Exchange's website.

5.1 NFX Trade Reporting Overview

The main parties in the trade reporting process are:

- Customer that is the beneficial owner of one or more trading accounts (Account) held with a Clearing Futures Participant;
- Clearing Futures Participant; and
- Brokerage firm that facilitates the execution of the trade between the clients, and is responsible for registration of the trade report.

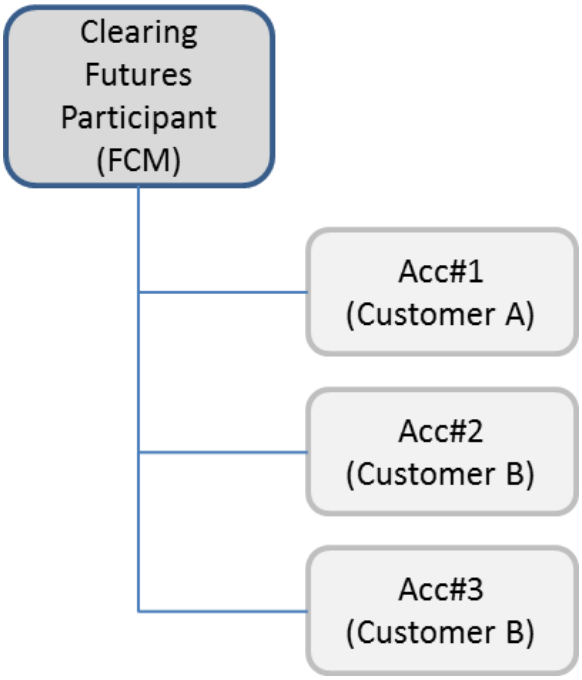
The broker will be required to obtain permission to do trade registration by a Clearing Futures Participant and obtain trade registration permission for a specific Account(s). Most clients (Trading Firms) who use Brokers rely on a variety of Broker Firms and permissions on a given account can be granted to multiple Brokerage Firms.

5.2 Client & Account Management

In order to submit a Block Trade to NFX, the party entering the transaction must have access to the reporting interfaces and must have been granted permission to enter the trades for the Account(s) involved in the Block Trade from the Futures Participant(s) carrying those accounts.

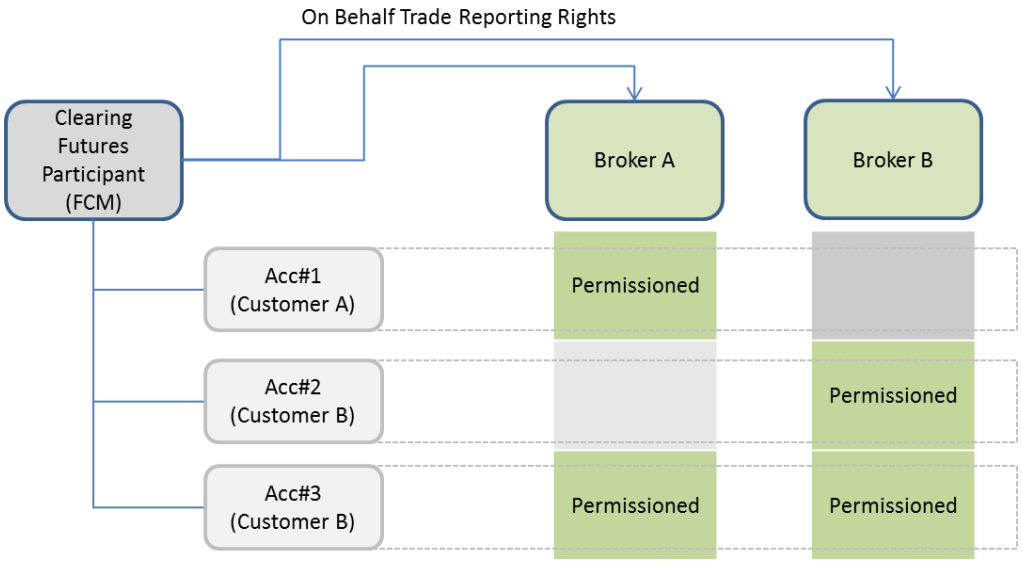
The following 3 steps need to be performed to submit Block Trades to the Exchange:

1. All customer Accounts must be registered in the NFX trading platform as accounts of a Clearing Futures Participant. This is required for all customer accounts, regardless if the customer is going to engage in Order Book trading or Block Trading. The account registration is electronically submitted via a request to the NFX Market Operations team.



2. A Participant (e.g. a broker) is granted the generic right to register Block trades on behalf of a Clearing Futures Participant.

3. The final step in the process of the Exchange permissioning a party to submit a Block Trade report is complete when the Clearing Futures Participant provides instructions for the assignment of a Participant with trade reporting rights for a specific Account (representing the Customer). The assignment is electronically submitted via the NFX Block trade reporting GUI, and any necessary modifications may be submitted and applied intra-day. Please note that no Block Trade reports can be submitted by a trade reporting Participant until the respective Accounts have been approved by the Exchange.



5.3 Trade Reporting Procedures

When a privately negotiated Futures, Options, or Combination Order transaction have been executed, the transaction must be reported to NFX within the specified time limits in the Exchange's Rulebook.

NFX supports submission of both principal-to-principal Block Trades, where each party reports its respective side of the trade; as well as third party Block Trades, where the broker has the obligation to register on behalf of the two principals.

When reporting a Block Trade, the following information will be required:

- Contract (including contract month and contract year for Futures, and, additionally for Options, strike price and put or call designation);
- Quantity of the trade or, for spreads and combinations, the quantity of each leg;
- Price of the trade or, for spreads and combinations, the price of each leg;
- Buyer's Clearing Futures Participant and seller's Clearing Futures Participant;
- Buyer's Customer Account and seller's Customer Account; and
- Execution time of the Order (i.e. the time at which the trade was consummated).

As described in the previous section, the accounts involved in the Block Trade must have been approved by the Exchange. In the event that a Block Trade is executed for an Account(s) for which the appropriate permissions has not been completed by the Clearing Futures Participant, the Block Trade will be rejected.

However, the Futures Clearing Participant could make an intra-day modification to receive approval from the Exchange to submit Block Trades.

5.4 Reporting Interfaces

Block trades can be submitted the following ways:

1. Electronically via the NFX workstation; or
2. Electronically via FIX API.

NFX Workstation

NFX provides Participants with a web-enabled user interface for submission of Block Trades. The interface allows users to enter complex Combination Orders up to twelve legs quickly.

All trades entered via the user interface will be qualified by the Pre-Trade Risk Management system, Genium INET TradeGuard PTRM (TradeGuard), before submission if such trades are part of a Pre-Trade Limit Group or PTLG created by the Participant.

Nasdaq adheres to high information security standards and the access to the NFX Workstation is thus protected by two factor authentication using client certificates. Please contact NFX market operations to request a client certificate.

API Interface

The NFX trading platform provides full trade reporting functionality via FIX for integration of ISVs and proprietary interfaces. The API supports reporting of both single trades as well as completes strategies with up to 12 legs. Please reference the NFX FIX API specification for complete details. All trades entered via API will be qualified by the Pre-Trade Risk Management system TradeGuard before submission if such trades are part of a Pre-Trade Limit Group or PTLG created by the Participant.

5.5 Risk Management

All Block Trades submitted to the Trading System will pass through the Exchange's Pre-Trade Risk Management System, TradeGuard, before being accepted by the Exchange for clearing by OCC if such trades are part of a Pre-Trade Limit Group or PTLG created by the Participant. TradeGuard checks the initiated (pending) position with all respective positions and risk metrics (as defined by the Clearing Futures Participant) before accepting Orders into the Trading System for clearing. If the proposed trade is rejected, the User (Authorized Trader or Authorized Customer) and responsible parties will be notified and provided a reason for the rejection. A Combination strategy and its respective legs must be qualified in its entirety by the Pre-Trade Risk Management System to avoid partial acceptance of this Strategy. For more detailed information on TradeGuard please see Section 2.6.1 in this Reference Guide.

6 CONTACT INFORMATION

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