Exhibit A

The Chicago Board Options Exchange—

OneChicago Security Futures Joint Venture

CBOE direct™ *Functional Requirements*

Prepared by:	Karen N. Christiansen
Level 1Review by:	Dick DuFour, Andy Lowenthal, Bob Walsh, Ed Horvath, Bruce Currie, Pat Cerny, Tom Busch
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1 Document History

Version	Date	Author	Reason
1.0	October 26, 2001	Karen N. Christiansen	Initial Draft.
1.1	October 29, 2001	Karen Christiansen	Incorporated internal Review Comments
1.2	November 9, 2001	Karen Christiansen	Additional review comments.
1.3	November 15, 2001	Karen Christiansen	Additional review comments.
1.4	December 3, 2001	Karen Christiansen	Incorporated updated requirements for: • Block Trading/EFPs • Settlement Price Calculation • Expanded List of Supported Origins • Regulatory Report Requirements • Support for MQ Series • Support for Batch updates to CTM futures database • Support CMTA Release Function • 102 Forms for CFTC • Establish Special Groups in membership system • ONE Clearing Table
1.5	December 21, 2001	Karen Christiansen	Various Changes
1.6	January 3, 2002	Paul Chandler	Legal comments and revisions
1.7	January 4, 2002	Karen Christiansen	Modified to provide consistency with system description provided to CFTC.
1.8	January 9, 2002	Paul Chandler	Legal comments and revisions.
1.8.1	February 26, 2002	Karen Christiansen	Incorporated modifications in response to CFTC review.
1.9	March 4, 2002	Karen Christiansen	Incorporated CME review comments.
1.11	May 6, 2002	Karen Christiansen	Modified trade bust procedures to be consistent with ONE rules. Updated CTI/Origin mappings.
1.13	August 20, 2002	Karen Christiansen	Clarified opening requirements.

2 Introduction

2.1 History

On May 14, 2001, the Chicago Board Options Exchange ("CBOE"), Chicago Board of Trade ("CBOT") and Chicago Mercantile Exchange ("CME") announced the creation of a joint venture ("ONE" or "OneChicago") for the purpose of listing Security Futures ("SFs" or "Security Futures"). As part of ONE, SFs will be traded electronically, and orders may be entered through both CBOE's new CBOE*direct*™ electronic platform and CME's GLOBEX®2 electronic trading system. ONE will contract with LMMs to provide liquidity for SFs.

In the SF market model, LMMs will provide continuous quoting by connecting proprietary auto-quote systems through an application program interface (an "API"). LMMs will want to refresh their quotes every time the quote for the underlying stock changes. Customer order flow will be sent via the CME's GLWin, iLink and TOPS interfaces and through the CBOE's COMPASS, FIX and CMi 2.0 interfaces. The Options Clearing Corporation ("OCC") will clear SF transactions. Trades for CME and CBOT members who are not members of OCC may be cleared through a special OCC account, with positions maintained at CME Clearing.

2.2 Purpose of this Document

CBOE will use CBOEdirect as the matching engine for ONE. This document provides the requirements for CBOEdirect. Those requirements include features in the existing CBOE screen-based trading environment of CBOEdirect and enhancements to CBOEdirect that CBOE has agreed to develop to provide matching services to ONE. The document also highlights the differences between the existing and the future environments. This document will be attached to and made a part of the Matching Services Agreement pursuant to which CBOE agrees to provide matching and matching-related services to ONE and its Authorized Users (the "Agreement").

2.3 Sources of Information

Sources for the information contained in this document include:

Stock Futures Exchange Assumptions and Systems Estimates (Eileen Smith)
Screen-Based Trading System Functional Specifications (Gordon Evora)
OCC Futures Matched Trade Record (Mark Baumgardner, OCC)
SSFX, LLC Match Engine Proposal Requirement (Dick DuFour, Ann Shuman)
CBOE*direct* Proposal to SSFX, LLC (Karen Christiansen)
Single Stock Futures Surveillance Issues (Maureen Smith)
COMPASS Futures Order/Report Formats (Carol Zylius)
CTM Data Requirements (Bruce Currie)

2.4 Scope Note

Statements in these Functional Requirements to the effect that a particular task is "outside the scope" of these Functional Requirements or that "functionality will not change" should be understood to mean only that CBOE will not initially perform the task or change the referenced functionality pursuant to these Functional Requirements, but may do so subsequently in accordance with the change order procedure specified in the Agreement (as defined below).

2.5 Glossary

The following terms, when used in this document, have the following meanings. Capitalized terms used and not otherwise defined herein have the meanings ascribed to them in the Rules.

"Agreement" means the Matching Services Agreement described in Section 2.2 above.

"API" means an application programming interface that permits exchange of data with CBOE*direct*.

"Average Pricing System" means a system that calculates the weighted average price of a trade that is executed at more than one price.

"Capacity Level" means the capacity of the Match Engine contracted for by OneChicago from time to time, stated in terms of the number of contracts per day traded on OneChicago's exchange using the Match Engine other than block trades and exchange-for-physicals trades (counting both sides of a trade as a single "contract").

"CAS" (an acronym for Client Application Server) means a remote computer that is linked to CBOE*direct*.

"CBOE Network" means CBOE's network, consisting of telecommunications circuits and APIs, through which communication is established with CBOE*direct*.

"CBOT" means The Board of Trade of the City of Chicago, Inc.

"Change Order" means a written change order agreed to by CBOE and ONE to modify these requirements. Change Orders and the process for agreeing to them are described in the Agreement.

"CMi" or "CBOE Market Interface" is an API providing access to all CBOE*direct* services. CMi is a distributed object interface based upon the CORBA standard from the Object Management Group.

"CMTA" means Clearing Member Trade Assignment (the mechanism used by a CBOE member executing firm to give up the name of the party that will be responsible for clearing trades entered into by the CBOE member).

"CTM" means CBOE Trade Match, a CBOE*direct*-related system that will provide post-trade processing functions and transmit detailed trade information to the OCC and to the CME Clearing House.

"COMPASS" is an API.

"Contract" means Product expiring in a particular Expiration Month.

"DPM" means designated primary market maker, an entity designated by CBOE to make markets, maintain the limit order book and perform certain other functions in respect of options traded on CBOE (as provided in the rules of CBOE).

"EOP" means expected opening price.

"Expiration Month" means, with respect to any Contract, the month of termination or expiration of such Contract.

"FIX" or "Financial Information Exchange" is an API that uses a message-based protocol implemented over TCP/IP.

"GLOBEX" is CME's electronic order matching engine.

"GLOBEX Network" means the network, consisting of telecommunications circuits and APIs, through which communication is established with GLOBEX.

"GUI" means graphical user interface.

"GUS" means Give Up System (the mechanism used by a member of CME to give up the name of the party that will be responsible for clearing trades entered into by the CME member).

"Help Desk" means the help desk operated by CBOE in connection with CBOE*direct*.

"ICS Data" means data in CBOE's Integrated Class/Series System.

"ITP" means CBOE's trade allocation and correction facility.

"Launch Date" means the date of first actual trading of Security Futures on the ONE market.

"Limit Price" means the maximum (minimum) price at which a limit order to buy (sell) may be executed.

"LMM" means a lead market maker approved by ONE in accordance with, and with the responsibilities specified in, a program adopted by ONE pursuant to the Rules.

"Match Engine" means CBOE's match engine presently known as CBOE*direct*. The term is further defined in the Agreement.

"MQ Series" means a messaging protocol developed by International Business Machines Corporation.

"OCC" means The Options Clearing Corporation.

"Origin" means the designation of trades or positions as being for the account of one of the types of traders set forth in Section 5.1.12 of these Functional Requirements.

"ORS" means CBOE's order routing system known by that acronym.

"Pipe" means a communications interface between CME and CBOE that will transmit data related to Quotes, Orders and fills between the GLOBEX Network and CBOE*direct* and data related to matched trades between CTM and the CME Clearing House.

"Product" means, with respect to Security Futures, all Security Futures covering a single underlying security or index (regardless of the Expiration Month).

"Quote" means both the bid and asked price of a Contract.

"Quote Block" means a set of Quotes of some or all of the Contracts included in a Product.

"Quote Message" means a message sent to CBOE*direct* that updates a single Quote or a Quote Block.

"RFQ" means "request for Quote."

"Rules" means the rules of ONE.

"SA GUI" means system administrator GUI.

"Security Futures" means futures contracts on individual securities and narrow-based stock indices.

"SIAC" means Securities Industry Automation Corporation.

"Trade Match" has the same meaning as CTM.

"Trade History" means a part of the CBOE Data Warehouse that stores detailed trade information that is used to feed Billing and Regulatory Systems.

3 Assumptions

This section articulates the assumptions used to define the requirements for CBOE*direct* and related CBOE systems.

3.1 General Assumptions

3.1.1 ONE Requirements

This document describes functionality required by ONE.

3.1.2 Clearing

3.1.2.1 CME Clearing Systems Changes

The ability of CBOE*direct* users to conduct post-trade processing and/or clear through CME is dependent on completion by CME of the necessary changes to its clearing systems.

3.1.2.2 CTI/Origin

CME will translate CTI/Origin combinations into the CBOE-supported Origins. CBOE will add new origin types to ensure that there is a unique origin for every valid CTI/Origin combination. CBOEdirect will process all quotes for Origin M (Market Maker).

3.1.2.3 Clearing Houses

Both OCC and CME will clear SF transactions for ONE. Transactions of OCC members and their affiliates may be cleared at the OCC. Transactions of CME members, who are not members of OCC will clear in the CME special account at OCC. CME members who are members of OCC may elect to clear at CME for the first year after the launch of ONE.

3.1.2.4 Matched Trades File

The matched trades file will be sent by CBOE to OCC as soon as possible after 4 p.m.

3.1.2.5 Average Pricing System

Support for an Average Pricing System is not an initial requirement for CBOE*direct*, and if desired by ONE, would be subject to Change Order.

3.1.2.6 Post-Trade Corrections

Firms that select CBOE as their post-trade processor will make post-trade corrections in the CBOE's CTM system via an ITP correction screen or batch correction. (Post-trade correction in the CME's systems is out of scope of these requirements.) CBOE may provide ONE with master-access to an ITP terminal that would enable ONE to make post-trade corrections on behalf of firms that do not have ITP access but this access is also out of scope of these requirements.

3.1.2.7 CMTA

OCC will provide CMTA facilities to OCC members for SFs. CMTA agreements for SFs will be separate from current equity and index option CMTA agreements.

3.1.2.8 Cross-Clearinghouse Transfers

OCC and the CME Clearing House will support a process to facilitate cross-clearinghouse transfers.

3.1.2.9 Exception Procedures

OCC and CME will provide procedures for post-clearing position movement from/to OCC and CME members for the purposes of error resolution, account transfers and member firm mergers.

3.1.2.10 OCC Dissemination of Reports to CFTC

After CBOE provides the daily matched trade file to OCC, OCC will provide daily reports to the CFTC detailing member firm positions in format acceptable to CFTC.

3.1.2.11 Large Trader Reporting

Development of a customer large trade data report for CFTC reporting purposes is out of scope of this document. OCC will be responsible for providing the OCC compliance tape to the CFTC for Market Maker and Clearing Firm large trade data.

3.1.3 *Price Dissemination*

The ability of OneChicago to disseminate Security Futures price data is dependent upon completion by the market data processor selected by OneChicago of its development work to support this dissemination. In addition, OneChicago must develop appropriate forms of agreement for data vendors and data subscribers.

ONE market data will be sent by the CBOE to the market data distribution system selected by ONE utilizing a feed from CBOEdirect, through a new adapter, via COPP. However, if the market data distribution system does not utilize the format of the Options Price Reporting Authority (OPRA) or SIAC, the systems changes to support a new format are out of scope.

ONE may choose to send market data through the CME vendor network using the market data supported by the CMi 2.0 interface. CME changes to support price dissemination are out of scope of this document.

3.1.4 Standard Equity Trading Hours

The initial hours of ONE trading will be from 8:30 a.m. until 3:02 p.m. Chicago time.

3.1.5 Back Office Functions

Regulatory/surveillance functions dependent upon receipt of data from CBOE*direct* will be supported by CBOE, but these functions are out of scope of this document.

Billing functions dependent upon receipt of data from CBOE*direct* will be supported by CBOE. These functions are within the scope of this document.

3.1.6 Training

Any participant training requirements, such as user or technical training, are outside the scope of this document.

3.2 Product Assumptions

3.2.1 New Product Entry

ONE will list SFs.

The CBOE Help Desk will add new Contracts, as instructed by ONE, after the close of trading on the previous business day for which the changes are effective.

3.2.2 Decimal Pricing

Pricing of SFs will be in decimals, not fractions, and prices will tick in $0.01 increments.

3.2.3 Price Limits

ONE will not implement daily price limits for SFs. Generally, when a stock is halted, trading in the corresponding SF will be halted as well.

3.2.4 Inter-class Spread Processing Not Supported

Spreads between Contracts of different Product classes will not be supported.

3.3 Access Assumptions

3.3.1 LMM Quote Entry

LMMs will enter quotes via CBOE-provided interfaces, either CMi 2.0 or FIX 4.2. If Market Makers are allowed to provide continuous quotes, they may do so via the GLOBEX Network only if CME supports the quote message type through the CMi 2.0 interface.

LMMs providing continuous quotes will update their bids and offers each time the underlying stock price (last sale) changes.

3.3.2 Market Maker Hand Held Terminals

Market Maker handheld terminals may be utilized to facilitate order entry from the CBOE trading floor for SFs on CBOE*direct*. The process to enter futures orders from such hand held terminals will be similar to what is currently in place to support stock execution on the Chicago Board Options Exchange. Programming efforts that are required to give traders the technology to support such order entry from the trading floor will be the responsibility of the Market Maker clearing firms or stock execution firms.

SF trade correction via market maker hand held terminals will not be supported.

3.3.3 LMM Assignments

ONE will notify CBOE of new LMM assignments before the close on the last business day before the day when the assignments are to be effective. The CBOE membership department will add new LMM assignments to the Membership System after the close of trading on the last business day before the day when ONE requests that the changes will be effective.

3.3.4 CBOT Member Access

CBOT members who do not have access to GLOBEX will access the SF environment via CBOE trader workstations. Interfaces with the a/c/e platform (CBOT's electronic trading platform) or CBOT order routing are not planned for the initial ONE rollout and are out of scope of this document.

3.4 Billing Assumptions

3.4.1 Billing Processing

CBOE will be the main processor for billing of SFs. CME will bill firms who clear their trades at the CME Clearing House. CBOE's existing "Integrated Billing System", together with appropriate enhancements, will be utilized for this purpose.

Systems work to facilitate billing is within the scope of this document.

3.4.2 Fee Types

ONE will bill for transaction fees. A separate fee structure for non-compliance with LMM obligations, if desired by ONE, would be subject to a Change Order.

No separate fee for trade match is required.

3.4.3 Fee Differentiation

Transaction fees will be differentiated based upon Origin.

Market Makers will be assessed market maker fees for trades in all SFs. No support for product "zones" or "bins" is planned.

3.5 Assumptions Regarding CME Responsibilities

3.5.1 CMi 2.0 Interface

Users connected to the GLOBEX Network may send orders to CBOE*direct* for SFs from their current connections. The CME will route such orders to CBOE*direct*, in the CMi 2.0 format, through the Pipe, and the ability of users to access CBOE*direct* through the GLOBEX Network is dependent on development of the Pipe. Development of the Pipe is out of scope of this document.

3.5.2 Access

ONE requires that users connecting to CBOE*direct* through the GLOBEX Network be able to conduct post-trade allocation and correction in the CBOE's CTM system. To facilitate this, CME must identify GLOBEX users to CBOE*direct* with their CBOE acronym, OCC clearing number and the CBOE exchange identifier.

3.5.3 Non-Supported Clearing Fields

CME will translate CTI/Origin combinations into the OCC-supported Origins before submitting orders to CBOE*direct* and after trade reports are received.

3.5.4 Trade Match Communication

The CME's GLOBEX Trade Processing system ("GTP") will communicate with CBOE via MQ Series as the primary interface.

3.5.5 Billing

ONE Transaction Fee invoices for non-OCC firms will be invoiced to the CME special account at OCC. CBOE will provide billing detail to the CME for further processing.

3.5.6 Support

The CME will provide level one support to CME users accessing ONE through the GLOBEX Network. The GLOBEX Control Center ("GCC") will communicate with the CBOE Help Desk with respect to problems that require CBOE efforts to resolve.

3.5.7 Validation of Give-Up Relationships

CME will maintain a table of valid CMTA to GUS relationships and will validate all allocations for valid relationships. If CBOE sends an invalid allocation to CME, CME will reject the allocation and send a message to CBOE's CTM system.

3.6 Assumptions Regarding OneChicago Responsibilities

3.6.1 Clearing Services Agreements

OneChicago will finalize clearing services agreements with CME and OCC, and OCC and CME will finalize their associate clearinghouse agreement.

3.6.2 OneChicago-CME Pipe Agreement

OneChicago will finalize its agreement with CME relating to development and implementation of the Pipe.

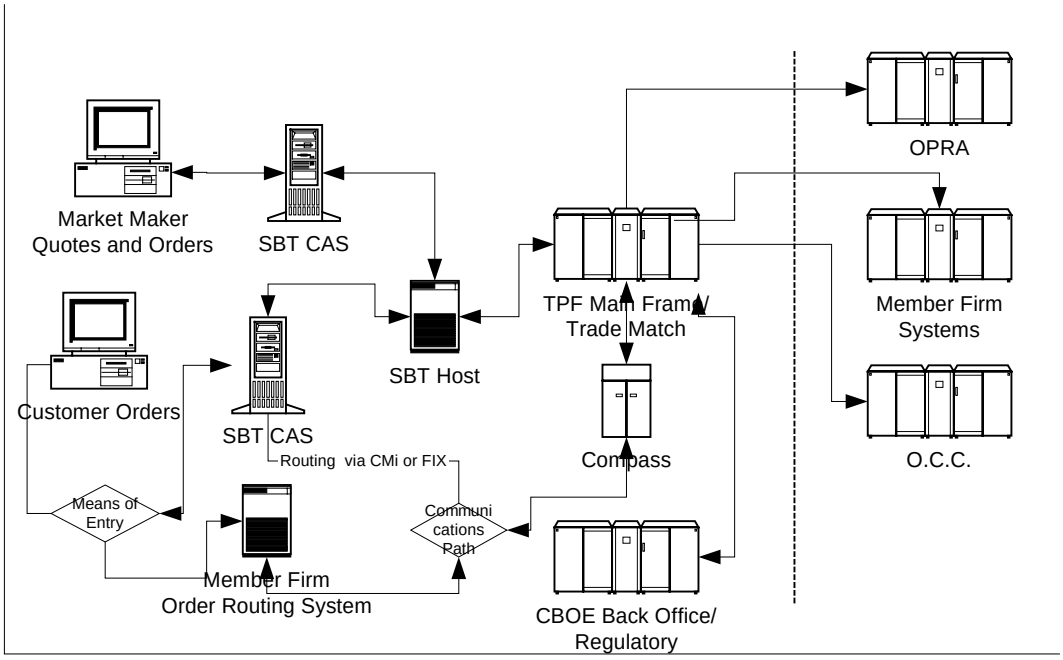
3.6.3 Designation of Initial LMMs

OneChicago will designate LMMs for all Products that will be traded on the Launch Date sufficiently in advance of the Launch Date to enable the LMMs to perform necessary systems work.

4 Current State Business Process Flow

This section provides a high-level overview of the current business process flow for CBOE*direct* and its related systems. The purpose of this section is to give the reader a description of the existing environment, before any modifications are made to SF trading.

4.1 Diagram



4.2 Description

4.2.1 Market Maker Quote and Order Entry

In the current environment, CBOE supports two types of Market Makers: (i) DPMs; and (ii) Regular Market Makers. The function of these user types is to provide market liquidity to support execution of customer orders. Appropriate member committees define DPM and Market Maker obligations. The CBOE Board of Directors approves these obligations. CBOEdirect provides specific Market Maker functionality to assist these users in meeting their obligations.

The Market Control functions provided to the help desk enable system administrators to maintain Market Maker profiles that identify the accounts where Market Maker trades will settle.

4.2.1.1 Quote Attributes

A quote is a Market Maker commitment to buy and/or sell an option series at a specified price and quantity. CBOEdirect requires the following information from the user interface or the quote engine:

- Class and Series ID
- Call or Put
- Bid Price
- Ask Price

- Bid Quantity
- Ask Quantity
- Session Identifier (W_AM1; W_MAIN)
- Executing Firm
- Market Maker Acronym
- Optional Data

4.2.1.2 Order Types

Market Makers may enter orders for any class. CBOEdirect supports the following order types:

- Limit
- Market
- Contingencies

4.2.1.3 Order Attributes

CBOEdirect requires the following information from the user interface for Market Maker order entry:

- Class and Series ID
- Call or Put
- Side (Buy or Sell)
- Price
- Quantity
- Session Identifier (W_AM1; W_MAIN)
- Executing Firm
- Market Maker Acronym
- Time In Force
- Contingency
- Optional Data Field
- Open, close, or neither
- Order Source
- Covered or uncovered for sell orders

4.2.1.4 Entry Mechanism

Market Makers can enter orders and quotes into CBOEdirect via the CBOE Workstation and standard GUI or via a proprietary or third party trader workstation. Market Makers can enter auto-quotes from proprietary and third party applications. CBOE discourages Market Makers from entering excess quote traffic by a cost structure that levies fees for quotes that exceed a certain threshold.

4.2.1.5 RFQ Response

A user generates a Request for Quotation ("RFQ") when he or she wishes to enter an order in a series and desires an updated bid and/or ask. CBOEdirect will generate an RFQ when a user enters a market order and the bid/ask spread exceeds the exchange-prescribed width. The GUI displays RFQs in the "Pending RFQ" window. Additionally the series display in the Market Display window changes color to alert the user to the RFQ's existence.

CBOE requires Market Makers to respond to a prescribed percentage of RFQs. To meet the Market Maker obligation for RFQ response, the Market Maker must meet the following conditions:

- Provide a quote within n (30) seconds
- Provide a quote that is equal to or narrower than the exchange defined width
- Provide a quote size that is equal to or greater than the specified minimum size

- Provide a continuous market for at least n (30) seconds or until the quote is filled; quotes may be updated during this time but may not be canceled to maintain credit for providing a continuous market.

4.2.1.6 Quote Maintenance

Once the Market Maker enters a quote, CBOEdirect provides the ability to cancel specific quotes, cancel all quotes of a specific class or cancel all quotes in all classes.

CBOEdirect also provides functionality to cancel/replace or modify quotes. Modifying a quote may or may not cause the quote to lose its priority in the order book. The table below depicts the effect on quote priority of specific actions. Section 4.2.4 discusses quote priority in the order book in further detail.

Action	Impact on Order Book Priority
Price change.	The side of the quote loses position. The new quote lines up behind all existing orders and quotes at the new price.
Quantity increased on one side of quote.	The unchanged side retains position. The quote side with increased quantity goes to the back of the line in the order book.
Quantity decreased (one or both sides).	Quote retains position.
Quantity increased on both sides of quote.	Quote loses position. The quote goes to the back of the line in the order book.

CBOE*direct* provides risk monitor functionality. This functionality provides the means for Market Makers to control their risk after they have begun to accumulate a position as a result of quotes being hit. When a predefined number of Contracts quoted by the Market Maker result in trades within a predefined timeframe, CBOE*direct* will remove his or her remaining quotes in the same class. CBOE*direct* then issues an alert to the Market Maker informing him or her of this action. The Market Maker then can determine what action to take regarding his quotes in that class.

4.2.1.7 Order Maintenance

CBOE*direct* enables a Market Maker to display the status of his or her orders in the Order Status Window. The Market Maker can select to view either working orders or filled or canceled orders, or both working and filled or canceled orders. He or she can filter the display to view only the orders of a specified class. From the Order Status window the Market Maker can cancel, update or cancel/replace his or her orders.

The table below depicts the effect on order priority of specific actions.

Action	Impact on Order Book Priority
Price change.	The order loses position. The new order lines up behind all existing orders and quotes at the new price.
Quantity increased.	The order loses position. The new order lines up behind all existing orders and quotes at the new price.
Quantity decreased.	Order retains position.

4.2.2 Order Entry for Member Firm Brokers

Users who are not Market Makers enter only orders, not quotes, into CBOEdirect.

4.2.2.1 Order Attributes

A user submits the following information when an order is transmitted to CBOEdirect for matching:

- Class and Series ID
- Call or Put
- Side (Buy, Sell or Spread)
- Price
- Quantity
- Time in Force (Day or GTC)
- Session Identifier (W_AM1; W_MAIN)
- Contingency
- Open/Close Indicator
- Covered/Uncovered Indicator (for sell orders only)
- Order Source
- Branch/Sequence Number
- Executing Firm
- Broker Acronym
- Give-up Firm
- Correspondent Firm ID
- CMTA Clearing member ID
- Sub-account ID
- Optional Data

4.2.2.1.1 Spread Order Types

CBOEdirect supports the following spread order types:

- Vertical
- Combo
- Straddle
- Time
- Other

4.2.2.1.2 Contingency Types

CBOEdirect supports the following order contingencies

- All or None (AON)
- FOK (Fill or Kill)
- IOC (Immediate or Cancel)

4.2.2.1.3 Order Source Types

CBOEdirect supports the following order sources:

- Customer* (C)
- Firm* (F)
- Broker/Dealer (B)
- Market Maker* (M)
- Customer Broker/Dealer (X)

*OCC-supported origins

4.2.2.2 Request for Quotation

The member firm broker may submit an RFQ for a specific series. If desired, he or she may submit a quantity with the RFQ.

4.2.2.3 Order Entry Mechanism

The member firm broker may submit orders to CBOEdirect via the CBOE Order Routing System (ORS/COMPASS) or through the FIX or CMi 2.0 APIs. Orders submitted through FIX or CMi 2.0 can come from the CBOE Workstation, a third party trader workstation or the member firm's internal order routing system.

CBOEdirect validates orders before posting them into the order book. CBOEdirect returns an invalid order to its source of origin with an error message. CBOEdirect returns invalid orders received via ORS to a designated booth location for manual handling.

4.2.2.4 Order Maintenance

The member firm broker's order status and maintenance function is similar to that of the Market Maker. The broker can display open orders, closed orders or open and closed orders. From the Order Status Window, the broker can cancel, update or cancel/replace orders on behalf of the firm and its customers.

The table below depicts the effect on order priority of specific actions.

Action	Impact on Order Book Priority
Price change.	The order loses position. The new order lines up behind all existing orders and quotes at the new price.
Quantity increased.	The order loses position. The new order lines up behind all existing orders and quotes at the new price.
Quantity decreased.	Order retains position.

4.2.3 Quotes and Orders Sent to CBOEdirect

Once CBOEdirect receives quotes and orders from Market Makers and member firm brokers, it processes them in accordance with pre-defined system parameters.

4.2.3.1 States of Operation

CBOE*direct* has five separate phases or states of operation. For each state of operation, specific rules related to order entry apply. These rules are outlined in the table below.

State of Operation	Description
Pre-opening	The pre-opening is a period n (45) minutes before the opening of the underlying security (opening stock print and quote) during which users may enter quotes and orders. Quotes and orders are booked. No order matching is done.
Opening Rotation	The Opening Rotation begins when the opening event is triggered (either at a scheduled time or when the opening quote or trade of the underlying security is received) . CBOEdirect disseminates an opening notice. Users may enter quotes and orders during this phase. CBOEdirect displays bids and offers in the book. After the first n (15) seconds of this phase, the system calculates and disseminates the Expected Opening Price (EOP). The EOP is recalculated and disseminated every n (2-3) seconds. CBOEdirect also sets the starting time of the actual opening at a randomly selected time between n (20) and n (33) seconds after the opening notice is sent. CBOEdirect establishes the opening price by series during the actual opening. Quotes and orders are accepted during the actual opening but are put into a hold status until trading starts.
Trading	This is the normal operating state for CBOEdirect. Orders and quotes are accepted and matched according to CBOEdirect 's matching rules.

Halted	This market state can be manually invoked or be automatically initiated. Orders are accepted during this state but quotes are not. No matching occurs. Reasons for trading halts include a trading halt for the underlying security in the primary market, lack of price dissemination or regulatory reasons.
Closed	This market state provides order maintenance opportunity. Orders and quotes may be canceled during this state but no new orders and quotes will be accepted. No matching occurs.

In addition, the Fast Market State can be initiated according to pre-defined business rules or by system administrator intervention.

4.2.3.2 Market Display

CBOE*direct* provides a high degree of price transparency to system users. The "Market Display" provides detailed information of the best bids and offers in CBOE*direct*. For each series, the following data is shown:

- Series ID
- Last sale price
- Market's best bid price
- Market's best bid quantity
- Market's best offer price
- Market's best offer quantity
- Trader's best bid price
- Trader's best bid quantity
- Trader's best offer price
- Trader's best offer quantity
- Trading day's opening price
- Trading day's high price
- Trading day's low price
- Last sale quantity
- Total quantity traded

The market's best bid and best offer quantity fields usually contain only limit orders. When the best bid and/or offer includes IOCs, the quantity of the IOCs is included in the display. In a separate section of the *CBOEdirect* GUI's Market Display window, CBOEdirect provides the aggregate quantity of limit orders, including the quantity of IOC orders, FOK orders and AON orders and an indication of more than one FOK or AON order.

A second section of the Market Display provides a transaction snapshot for the underlying security and any indications of news alerts. Another line displays a sliding ticker showing individual sales transactions in the underlying security.

4.2.3.3 Book Depth

CBOEdirect will provide upon a user request a summary of the market depth. This includes the sum of contingency orders and the total number of Contracts at each price. The book depth information is provided as a snapshot and is not updated continually for the same summary request.

4.2.4 CBOEdirect Matches Trades

4.2.4.1 Opening Procedures

The CBOEdirect opening is divided into two phases: (i) the Pre-Opening Phase; and (ii) the Opening Rotation Phase.

4.2.4.1.1 Pre-opening

The Pre-Opening Phase is a period of n (5-45) minutes before the scheduled opening . Quotes and orders may be entered but no matching occurs. CBOEdirect displays resting orders in the book that remain from the prior trading day and any orders and quotes sent in before the opening rotation.

4.2.4.1.2 Opening Rotation Phase

When the primary market disseminates the opening trade or the opening quote of the underlying security, CBOE*direct* enters the Opening Rotation Phase. (In the event the opening is scheduled at a time when there is no underlying security, CBOE*direct* enters the Opening Rotation Phase at the scheduled time. In this case, the timer triggers events that are otherwise triggered by the opening of the underlying security.) CBOEdirect sends an opening notice to market makers who are assigned to that class to solicit their opening quotes.. Market Makers submit their opening quotes. CBOE*direct* also sets the starting time of the actual opening at a randomly selected time between n (20-33) seconds after the receipt of the underlying security's opening price. The random setting is designed to prevent market manipulation at the opening.

During the Opening Rotation, CBOE*direct* accepts quotes and orders and displays them in the book. After the first n (15) seconds of this phase, CBOE*direct* begins to calculate and disseminate the expected opening price (EOP) based on the orders then in the book. This value is re-calculated and disseminated every n (2-3) seconds until the start of the actual opening.

4.2.4.1.3 Opening Rotation

The objective during the opening is to open at a price that leaves no crossed orders in the order book. A standard quote must be present for an opening trade to occur. The "EOP" is the price that results in the highest matched quantity. The EOP is only calculated if an opening trade is possible. If no opening trade is possible, a zero is disseminated.

4.2.4.1.3.1 Opening Price Determination

The objective is to determine the expected opening price (EOP) that would leave no orders in the book that can be matched.

Here's a sample beginning book, Table 1.

Buy Qty	Book Price	Sell Qty
0	$7.00	120
5	$6.50	95
10	$6.00	75
15	$5.50	35
45	$5.00	15
65	$4.00	10
110	$3.50	0

This means there are 0 to buy and 120 to sell at $7.00; there are 5 to buy and 95 to sell at $6.50, etc.

Assume that there is a market order to buy 3 and a market order to sell 7.

To determine the EOP:
If the book is crossed (best bid price higher than the lowest offer) or locked (best bid price equals best offer price) or there are market orders, then there must be at least one standard quote in this book before the EOP determination can proceed to the next step. Otherwise, the EOP is not calculated and no EOP is disseminated. This stems from the requirement that a standard quote must be present for an opening trade to occur.
Calculate the cumulative buy quantity and cumulative sell quantity at each price level. Cumulative Buy Qty is cumulated from the highest buy price to the lowest buy price. Cumulative Sell Qty is cumulated from the lowest sell price to the highest sell price. Market buy orders (of which there are 3 in this example) are added as if they are buy orders at the highest price, e.g., $7.00. Market sell orders (of which there are 7 in this example) are added as if they are sell orders at the lowest price, e.g., $3.50. The resulting table is shown below as Table 2. The cumulative columns are read as follows: There are 78 to buy at $5.00 or higher price, and there are 32 to sell at $5.00 or lower price.

Table 2

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty
3	3	$7.00	120	357
8	5	$6.50	95	237
18	10	$6.00	75	142
33	15	$5.50	35	67
78	45	$5.00	15	32
143	65	$4.00	10	17
253	110	$3.50	7	7

At each price level, for the pair of cumulative quantities, select the smaller quantity. The smaller quantity is the matched quantity at that price. The resulting table is shown in Table 3.

Table 3

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty	Matched Quantity
3	3	$7.00	120	357	3
8	5	$6.50	95	237	8
18	10	$6.00	75	142	18
33	15	$5.50	35	67	33
78	45	$5.00	15	32	32
143	65	$4.00	10	17	17
253	110	$3.50	7	7	7

The EOP is the price with the highest matched quantity. In the example, it is $5.50 with 33 as the matched quantity. On the buy side, these orders will be matched: 3 at market, 5 at $6.50, 10 at $6.00, and 15 at $5.50. On the sell side, these orders will be matched: 7 at market, 10 at $4.00, 15 at $5.00, and 1 at $5.50. All of these orders will be executed at $5.50. Both buy and sell orders get a break. The buy orders willing to buy at higher than $5.50 execute at that lower price. The sell orders willing to sell at lower than $5.50 execute at that higher price. The resulting book is shown as Table 4.

Table 4

Buy Qty	Book Price	Sell Qty
0	$7.00	120
0	$6.50	95
0	$6.00	75
0	$5.50	34
45	$5.00	0
65	$4.00	0
110	$3.50	0

Note that the resulting, opening quote is 45 at $5.00 and 34 at $5.50.

This example covers the case where there are crossed or matching orders in the book. If there were no crossed or matching orders in the book, then there would be no opening trade or price, and EOP would be disseminated as zero. After the opening rotation the best bid and the best offer in the book are disseminated to OPRA as the opening quote whether or not they are within the exchange-prescribed-width. A half-quote (no bid or no ask) may also be disseminated to OPRA.

If the calculation results in two or more prices in Table 3 that have identical highest matched quantity, then the system shall determine the opening price by using the tie-breaking rules below.

4.2.4.1.3.2 Rules for Breaking ties of Expected Opening Prices

- For each EOP, determine if the opening price falls within or on the resulting opening quote. If not,discard it.
- After step 1, if only one EOP is left, open at that price.
- If more than one EOP remain, select the one closest to the midpoint of the resulting opening quote.
- If there are two EOPs that are equally close to the midpoint, break the tie as follows.
    - If the underlying price is available, as in RTH, if the direction of the last underlying change is positive open at the higher price. For negative change open at the lower price.
    - If the underlying price is not available select the opening price randomly, e.g., the sytem would “flip a coin”.
- If resulting quote is missing the bid price and the EOPs are not on the resulting quote, use the lowest EOP.
- If resulting quote is missing the ask price and the EOPs are not on the resulting quote, use the highest EOP.

The spreadsheet below is used to determine the EOP, which are the prices where the maximum contract volume can be traded. It presents the book price in the middle column and, on either side, the total buy and sell quantities at each price. To determine the EOP: First, the cumulative buy quantity is cumulated from the top, the cumulative sell quantity from the bottom. Second, the matched quantity is obtained by picking the smaller number between the cumulative buy and sell quantities at each price level. Third, the price with the highest number among the matched quantities is the EOP.

Examples

1. Even number of EOPs after Step 1. The quotes are shaded.

Situation: Customer orders crossing @ $1.10.
MM quotes are 0.85-.95, 10x10, 0.80-1.00, 10x10, 0.90-1.15, 10x10.
Cannot open because of more than one possible opening price.

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty	Matched Qty	
0				31	0	
0				31	0	
0	0	$1.20	0	31	0	
0	0	$1.15	10	31	0	
10	10	$1.10	1	21	10	EOP
10	0	$1.05	0	20	10	EOP
10	0	$1.00	10	20	10	EOP
10	0	$0.95	10	10	10	EOP
20	10	$0.90	0	0	0	
30	10	$0.85	0	0	0	
40	10	$0.80	0	0	0	

Step 1: Determine if EOP falls within or at resulting opening quote.
Resulting opening quote is 0.90-1.00, 10x10
EOPs of 1.05 and 1.10 are outside the opening quote, so discard them.
EOPs of 0.95 and 1.00 are at or within the opening quote, so keep them.

Step 2: The midpoint of the opening quote is 0.95, therefore, select 0.95 as the opening price.

2. Odd number of EOPs after Step 1.

Situation: Customer orders crossing @ $1.10
MM quotes are 0.85-.95, 10x10; 0.75-1.25, 10x10; 0.95-1.05, 10x10 (shaded)
Cannot open because of more than one possible opening price.

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty	Matched Qty	
0				40	0	
0				40	0	
0	0	$1.50	0	40	0	
0	0	$1.25	10	40	0	
0	0	$1.15	0	30	0	
10	10	$1.10	10	30	10	EOP
10	0	$1.05	10	20	10	EOP
10	0	$1.00	0	10	10	EOP
20	10	$0.95	10	10	10	EOP

30	10	$0.85	0	0	0
40	10	$0.75	0	0	0

Step 1: Determine if EOP falls within or at resulting opening quote.
Resulting Opening Quote = 0.95 -1.05, 10x10.

EOP of 1.10 is outside the opening quote, discard.
EOPs of 0.95, 1.00, and 1.05 are either at or within the opening quote. Keep.

Step 2: The midpoint of the opening quote is 1.00. Therefore, select 1.00 as the opening price.

3. Even number of EOPs after Step 1.

Situation: Orders crossing @ $0.75 for 10 contracts
MM quotes are 0.80-.95, 10x10, 1.05-1.15, 10x10
Cannot open because of more than one possible opening price.

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty	Matched Qty	
0				30	0	
0	0	$1.25	0	30	0	
0	0	$1.20	0	30	0	
0	0	$1.15	10	30	0	
0	0	$1.10	0	20	0	
10	10	$1.05	0	20	10	EOP
10	0	$1.00	0	20	10	EOP
10	0	$0.95	10	20	10	EOP
10	0	$0.90	0	10	10	EOP
10	0	$0.85	0	10	10	EOP
20	10	$0.80	0	10	10	EOP
30	10	$0.75	10	10	10	EOP
30	0	$0.70	0	0	0	

Step 1: Determine if EOP falls within or on resulting opening quote.
Resulting opening quote is 0.80 - 0.95, 10x10.

EOP of 0.75, 1.00, and 1.05 are outside the resulting opening quote. Discard.
EOP of 0.80, 0.85, 0.90, and 0.95 are either at or within the resulting opening quote. Keep.

Step 2: The midpoint of the opening quote is 0.875. There are two EOPs that are equally close to the midpoint, 0.85 and 0.90. The system randomly selects one, e.g., 0.90 as the opening price.

4. Resulting Opening Quote is a no-offer Quote.

Situation: Inverted book.
MM quotes is 0.55-0.70, 10x10
Cannot open because of more than one possible opening price.

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty	Matched Qty	
0	0	$1.00	0	10	0	
200	200	$0.95	0	10	10	EOP
200	0	$0.75	0	10	10	EOP
200	0	$0.70	10	10	10	EOP
210	10	$0.55	0	0	0	
210	0	$0.50	0	0	0	
210	0	$0.25	0	0	0	
210	0	$0.20	0	0	0	

Step 1: Determine if EOP falls within or at the resulting opening quote.
Resulting opening quote is 0.95-0, 190x0.
Of all the EOPs, only 0.95 is at the resulting opening quote. Keep. The others are lower than the opening bid. Discard.
Therefore, select 0.95 as the opening trade price. However, this trade price does not meet the test of being within the acceptable price range (.75 x $0.55 to 1.25 x $0.70). The system does not open, sends an RFQ, and issues the message 'PRICE NOT IN QUOTE RANGE' in the Opening Price column.

4. Resulting opening quote is a no-bid quote.

Situation: Inverted book.
MM quotes is 0.55-0.70, 10x10
Cannot open because of more than one possible opening price.

Cumulative Buy Qty	Buy Qty	Book Price	Sell Qty	Cumulative Sell Qty	Matched Qty	
0	0	$1.00	0	210	0	
0	0	$0.95	0	210	0	
0	0	$0.75	0	210	0	
0	0	$0.70	10	210	0	
10	10	$0.55	0	200	10	EOP
10	0	$0.50	200	200	10	EOP
10	0	$0.25	0	0	0	
10	0	$0.20	0	0	0	

Step 1: Determine if EOP falls within or at the resulting opening quote.
Resulting opening quote is 0-0.50, 0x190.
Of all the EOPs, only 0.50 is at the resulting opening quote. Keep. The others are higher than the opening offer. Discard.
Therefore, select 0.50 as the opening trade price.

4.2.4.2 Matching Algorithm

CBOEdirect supports two different trade allocation procedures: (i) strict price-time priority (i.e., first in/first out or FIFO at each price level); and (ii) price/time/pro-rata allocation. On top of these algorithms, customer priority, market turner priority and DPM trade participation rights can be applied. The allocation procedure is configurable by class.

4.2.4.2.1 Price/Time Allocation Procedure

Price/Time Allocation used in CBOE*direct* provides for first-in, first-out matching at each price level. The first order at a given price level is the first order to be filled. If the market continues to trade at that price, orders are filled in the order in which they were entered. Given price/time parity, non-contingency orders have priority over contingency orders.

4.2.4.2.2 Price/Time/Pro-rata Allocation Procedure

Under Price/Time/Pro-rata Allocation, the executable quantity is allocated to resting orders in proportion to their quantity regardless of the order in which they were entered. Non-contingency orders have priority over contingency orders. When market turner priority is applied, the order that betters the market (i.e., a market turner) is filled completely before any other orders at that price. The remaining executable quantity, if any, is allocated to resting orders in proportion to their quantity regardless of the order in which they were entered.

4.2.4.2.3 Customer Priority

Customer Priority is a feature that can be turned on or off by class and can be used in conjunction with both price/time and price/time/pro-rata allocation. When Customer Priority is applied customer orders have priority over all remaining orders at the same price, regardless of order arrival time.

4.2.4.2.4 Trade Participation Right

DPM Trade Participation Right is a feature that can be turned on or off by class and can be used in conjunction with both Price/Time Allocation and Price/Time/Pro-rata Allocation. When DPM Trade Participation Right is applied, once higher-priority orders are filled the DPM is entitled to a configurable percentage of the remaining order quantity, up to the quantity of the DPM's quote. The remaining DPM quote and orders, if any, also participate in the allocation of the remaining executable quantity.

4.2.4.2.5 Market Order Processing

CBOEdirect protects market orders by automatically executing such orders against the best bid or offer only if there is a "standard" market (the book width is less than or equal to the Exchange Prescribed Width). If there is no standard market, CBOEdirect puts the market order on hold and solicits quotes by automatically sending an RFQ message. CBOEdirect will attempt to execute the market order after any one of the following conditions is true:

- The best quote's width is within a specific percentage of the Exchange Prescribed Width
- A specific percentage of assigned Market Makers have responded
- The RFQ period has elapsed
- A limit order on the same side as that market order is received that would match the best bid or offer and at least one standard quote has been received.

If a market order for a specific series is queued, subsequent market orders for the same series and side are queued behind the initial market order. This ensures market orders are processed in time sequence.

4.2.4.2.6 Limit Order Processing

When a limit order is received, CBOEdirect attempts to match the limit order against the best bid or best offer, regardless of whether a standard market exists. If prices do not match, CBOEdirect stores the order

in the book in the appropriate price time sequence. If the prices match, the orders are executed against each other. Any remainder becomes a resting order in the book.

4.2.4.2.7 Contingency Orders

Contingency orders have the lowest execution priority. AON orders must be executed at their full quantity or not at all. CBOEdirect accepts AON orders at any time.

FOK orders must be executed at their full quantity within a specified period of time or not at all. FOK orders are accepted only during Trading State.

IOC, also known as Fill and Kill, orders must be executed for whatever quantity is possible within a specific period of time. Any quantity that can not be executed within that timeframe is canceled. IOC orders are accepted only during Trading State.

4.2.4.2.8 Spread Order Processing

When CBOEdirect receives spread orders, CBOEdirect examines the book for orders that can be executed against each leg. If all legs can trade at the spread price at the proper ratio with the correct quantities, CBOE*direct* will trade the spread orders against the orders in the book. The process CBOE*direct* performs is described in detail in the Screen-Based Trading System Functional Specifications dated November 2001.

4.2.4.3 Closing Procedures

CBOEdirect closes the markets by ceasing trading a specific number of minutes following the closing tick of the underlying security.

4.2.5 CBOEdirect Processes Matched Trades

Fill reports are sent back to the originating device after orders have matched. If the order was entered via the CBOE Workstation, the fill report will appear in the "My Trades Log" screen. Fills for orders that were entered via COMPASS will be sent back through COMPASS. Fills for orders that came through the APIs will be sent through the API to the order source, either a workstation or member firm order management system.

CBOEdirect sends trades to Trade Match for further processing. Trade Match provides back office trade dissemination via the member firm drop copy.

4.2.6 Price Dissemination to OPRA

CBOEdirect disseminates quote and trade (last sale) information, via TPF and COPP, to the Options Price Reporting Authority ("OPRA"). Every best book bid or ask change for price or size generates a quote report to OPRA.

For trades, CBOEdirect and TPF provide the following information:

- Series
- Price
- Quantity
- Prefix
- Session ID

For quotes, CBOEdirect and TPF provide the following information:

- Series
- Bid and Offer Prices
- Bid and Offer Quantities

- Type
- Market Indicators
- Session ID

4.2.7 Member Firm Systems

Member Firms access their executed trades via Trade Match terminals and batch and real time input. From Trade Match, Member Firms can change or correct any non-critical fields for their own trades. Trade Match also provides on-line and transmission reports containing matched and unmatched trade data for the firms. For CBOEdirect, Member Firms may receive real time feeds to populate their internal bookkeeping systems.

4.2.8 Options Clearing Corporation

At the end of each trading day, Trade Match sends all trades to The Options Clearing Corporation ("OCC") for settlement and clearing. The data sent to OCC includes the following information for each trade:

Field Name	Required Field	Critical Field
Buy/Sell Code	Y	Y
OCC Number of the Executing Firm	Y	Y
Acronym of the Executing Broker	Y	Y
Contract Quantity (5 character limit)	Y	Y
Put/Call Code	Y	Y
Trading Symbol (5 character limit)	Y	Y
Expiration Month	Y	Y
Expiration Year	Y	Y
Exercise Price Integer	Y	Y
Exercise Price Fraction	Y	Y
Cabinet Indicator	N	N
Premium Price Integer	Y	Y
Premium Price Fraction	Y	Y
Filler	Y	Y
Open/Close Indicator	N (Assumed open if blank)	N
Origin Code	Y	N
OCC Number of the Opposite Firm	Y	Y
Acronym of the Opposite Broker	Y	Y
Give Up Firm (CMTA)	N	N
Market Maker Broker Account	N	N
Halt Indicator	N	N
Firm Optional Data	N	N
Execution Time	Y	N
As Of (Trade) Date	Y	Y
Transaction ID	Y	Y
Transaction Sequence Number	Y	Y

4.2.9 CBOE Back Office Systems

4.2.9.1 Membership

The Membership System provides information about membership ownership and individual trading rights. To support CBOEdirect, an electronic trading right has been added to the Membership System. The Membership System feeds information about members to the Billing System to enable billing by membership type. The Membership System also provides information to CBOEdirect to control trading access privileges. When adds, changes or deletions are made to the membership database, CBOEdirect receives near real time notification.

4.2.9.2 Trade History

Trade Match sends processed trade information to Trade History. This information is logged and archived and used by CBOE back-office systems as the source for trade information. TPF also sends quote information to Market Data Retrieval ("MDR") for use by regulatory systems.

Additionally, CBOEdirect provides trade, quote and order information to the Data Warehouse. The Billing System inquires the Data Warehouse to calculate trading fees.

4.2.9.3 Billing data

The Billing System receives input from Trade Match, the Data Warehouse and the Membership System. Information from these systems is processed according to established business rules and statements are generated. CBOE transmits charges by firm to OCC and OCC clearing member accounts are credited and debited accordingly.

4.2.9.3.1 Transaction Fees

The CBOE charges transaction fees to the executing firms. Fees are assessed per contract, per side. Fees vary by product and by trader type (customer, member firm proprietary, and Market Maker).

In order to calculate the correct fees, Trade Match sends the following information to the Billing System daily for each executing firm:

- Product Types
- Trader Types
- Number of contracts traded

The Billing System calculates the appropriate fees based upon this data.

4.2.9.3.2 Market Maker Obligations

The CBOE fee structure encourages Market Makers to meet their obligations by assessing fees for non-compliance. Additionally, the CBOE fee structure discourages excessive quoting and requests for quotations through the assessment of fees.

Market Makers and DPMs are obligated to respond to a percentage of RFQs in their assigned classes. The response rate is configurable. The required response rate for DPMs is greater than the Market Maker response rate. When these participants do not respond at the required rate, they are assessed a fee. These fees are calculated on a monthly basis.

The Data Warehouse collects the following information daily, per firm, to support these fees:

- DPM or Market Maker
- Class

- Cumulative RFQ response rate for the period

Additionally, DPMs are required to provide opening quotes for their assigned classes. When a DPM fails to provide opening quotes, a fee is levied. The Data Warehouse provides daily the following information from Trade Match, per firm, to support these fees:

- DPM
- Class and Series
- Number of missed opening quotes

If the ratio of RFQs to executed trades exceeds a specified ratio, fees are assessed. A fee is charged for each RFQ that exceeds the stated ratio. Trade Match sends the billing system the following information daily, by firm, to support these fees:

- Trader
- Class
- Number of RFQs submitted
- Number of trades

A Trading Right allows a Market Maker to submit a certain number of free quotes per class, per day. When this number is exceeded, Market Makers are expected to maintain a specific quote to trade ratio. This business rule is designed to prevent Market Maker quotes from overwhelming CBOE*direct* without providing a corresponding increase of executed trades. There is a four-tiered fee structure, based on the quote to trade ratio. As the ratio increases so does the amount of the fee per quote.

Each day, the Data Warehouse collects the following data by firm:

- Market Maker
- Number of quotes per class
- Number of trades per class
- The Billing System calculates the ratios and assesses the appropriate fees.

4.2.9.4 Regulatory

The Regulatory Systems receive data from CBOEdirect, Trade Match, OCC, SIAC and the Membership Systems. This data is fed into systems designed to detect potential violations of securities laws.

Information gathered by the Regulatory Systems includes:

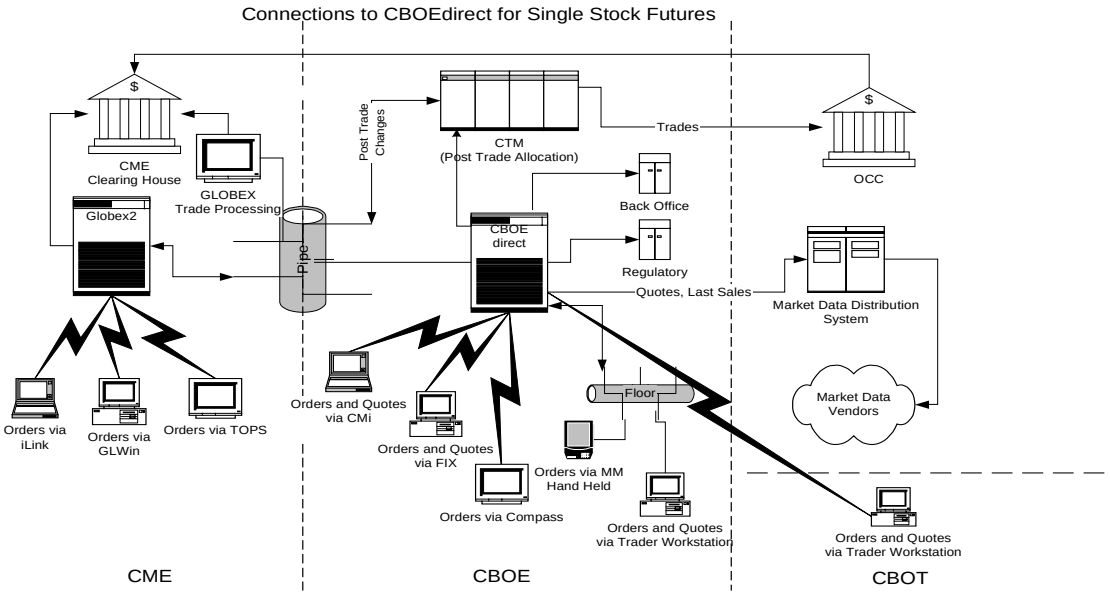
- Classes assigned to a Market Maker
- CBOE member firms
- Product class
- Relationship between two products
- Price formats
- Product types
- Products
- Unique subsets of the products within a class
- CBOEdirect users
- Trading sessions
- Exchange-defined quote spread width
- Exchange ID and related data
- Quantity available at bid price
- Trade counterparties

- CBOEdirect orders
- Order history
- CBOEdirect quotes
- Market data history (Current market, last sales, opening price)
- RFQ history

5 Future State Business Process Flow

This section provides a high-level overview of the business process for CBOEdirect and its related systems that CBOE has agreed to develop to provide matching services to ONE. Following this section, the document provides a gap analysis between the current and future state. Business requirements for ONE follow the gap analysis.

5.1 Business Process Flow Diagram



5.2 Description

Use of CBOE*direct* for ONE is designed to leverage the *CBOEdirect* functionality and connectivity to equity derivative liquidity providers. Clearing Members, Exchange Members and Access Persons may connect to CBOE*direct* through either the CBOE Network or the GLOBEX Network for trading and other front-end access. Clearing Members, Exchange Members and Access Persons that are already connected to either CBOE*direct* or GLOBEX will be able to connect to CBOE*direct* for purposes of trading Security Futures using those connections.

Order matching will occur on CBOE*direct.* CBOE*direct* will send fill reports back through the originating network to the originating workstation. Fill reports for GLOBEX users, as well as market data, will be sent by CBOE*direct* through the Pipe in the CMi 2.0 format. CBOE*direct* will send matched trades to CTM and to CME, where post-trade corrections of non-critical fields may occur. Communications between CTM and CME will be sent through the Pipe.

CTM will submit trades to OCC and CME for clearance and settlement. Trades for Persons who elect to clear through CME members will be designated in CTM for an omnibus clearing account maintained by CME with OCC.

CBOE*direct* will disseminate Quote and last sale information to the market data distribution system designated by ONE.

The CME's Post-trade processing system will communicate with CBOE via a MQ Series as the primary interface.

ONE has requested that CME build an identical OCC Matched Trade Record in the event a back up for the CBOE transmission to OCC is needed.

5.2.1 Market Maker Quote and Order Entry

CBOE*direct* will support both LMMs and regular market makers. Market makers (including LMMs) will be expected to make two-sided markets in their assigned Products, and may also enter Quotes and Orders for Products to which they are not assigned. CBOE*direct* will provide specific market maker functionality to assist these users in meeting their obligations.

CBOE*direct* will identify each market maker by user acronym. This acronym will be carried from the point of Order entry through the submission of executed trades to clearing and will be available to ONE as part of the audit trail.

The market control functions provided by the Help Desk will enable system administrators to maintain market maker profiles that identify the accounts where market maker trades will settle.

5.2.1.1 Quote Attributes

Market Makers will be expected to enter quotes for assigned Products. They will also be able to enter quotes for Products to which they are not assigned. CBOE*direct* will require the following information from market makers entering Quotes:

- Product and Expiration Month (e.g. IBM March)
- Price
- Side (Bid, Ask)
- Quantity
- Executing Firm
- Broker Acronym
- Exchange Identifier

5.2.1.2 Order Types

Market makers (including LMMs) will be able to enter Orders for any Contract. CBOE*direct* will support the following Order types:

- Limit
- Market
- Contingency
- Spread

5.2.1.3 Order Attributes

CBOE*direct* will require the following information for market maker (including LMM) order entry:

- Product and Expiration Month (e.g. IBM March)
- Side (Buy, Sell)
- Price
- Quantity
- Contingency (Stop, Stop Limit, Immediate or Cancel, Fill or Kill, All or None)(if applicable)
- Executing Firm
- Broker Acronym
- Exchange Identifier

- Time In Force
- Optional Data Field

CBOE*direct* will validate entered Orders and reject those Orders without the required information.

5.2.1.4 Entry Mechanism

Market makers will be able to enter Orders and Quotes into CBOEdirect via workstations connected to the CBOE Network and the CBOE*direct* GUI or proprietary or third party trader workstations. In addition, market makers will be able to enter orders into CBOEdirect via hand held units (like stock execution orders). Auto-quotes can be sent via proprietary and third party applications. Fee structures to discourage excessive Quote and Order traffic may be utilized.

CBOE*direct* will identify market makers by acronym. This User ID will be carried from the point of order or quote entry through the submission of executed trades to clearing and will be available to ONE as part of the audit trail. In addition, the system logs will identify the system log-in ID of the Order/Quote generator.

5.2.1.5 RFQ Response

CBOE*direct* users will be able to generate an RFQ to obtain an updated Quote from market makers in a specific Contract. Additionally, CBOEdirect will generate an RFQ when a user enters a market order and a standard bid/ask spread does not exist.

5.2.1.6 Quote Maintenance

CBOEdirect will permit Market Makers to change or delete their Quotes. Modification may cause a Quote to lose its priority. Section 4.2.1.6 describes the impact of specific cancel/replace actions on order book priority.

The SF trading implementation will include the current CBOE*direct* risk monitor functionality as described in Section 4.2.1.6 for users connected via the CBOE*direct* infrastructure.

5.2.1.7 Order Maintenance

A market maker will be able to display Order status using the filters currently supported by CBOE*direct*. A market maker will be able to cancel, update or cancel and replace an Order at any time prior to execution through the use of a designated CBOE*direct* "Order Status" window. Section 4.2.1.7 describes the impact of specific cancel/replace actions on order book priority.

5.2.2 Order Entry for Non-Market-Makers

Access Persons and Exchange Members that are not market makers may enter only Orders, not Quotes, into CBOEdirect. All order types will be available to these users through CBOEdirect.

5.2.2.1 Order Types

Users will be able to enter Orders for any Contract. *CBOEdirect* will support the following Order Types:

- Limit
- Market
- Contingency (including All or None, Fill or Kill, Immediate or Cancel, Stop, Stop Limit)
- Spread
- Cancel
- Cancel Replace
- Day
- Good-'til-Canceled

5.2.2.2 Order Attributes

A non-market-maker will be required to submit the following information when transmitting an Order to CBOEdirect for matching:

- Product and Expiration Month (e.g. IBM March)
- Side (Buy, Sell)
- Price
- Quantity
- Time in Force (Day or Good-'Til-Canceled)
- Session
- Contingency (All or None, Fill or Kill, Immediate or Cancel, Stop, Stop Limit)(if applicable)
- Origin
- Branch Sequence Number
- Executing Firm
- Broker Acronym
- Exchange Identifier
- Correspondent Firm ID
- CMTA Clearing Member ID
- Sub-account ID (Customer Account Number)
- Optional Data

5.2.2.2.1.1 Origin(Order Source) Types

CBOEdirect will receive orders from the following sources:

- Customer
- Access Persons
- Firm
- Broker/Dealer
- Market Maker
- LMM
- Exchange Broker

5.2.2.3 Request for Quotation

Users will be able to submit RFQs through the CBOE*direct* interfaces. If CME implements RFQ support, users connected to the GLOBEX Network will be able to submit RFQs as well.

5.2.2.4 Order Entry Mechanism

Users will be able to submit orders to CBOEdirect via the CBOE Workstation or via the COMPASS, FIX or CMi 2.0 interfaces. Orders submitted through COMPASS, FIX or CMi 2.0 can come from a third party trader workstation or the member firm's internal order routing systems. Order validation and confirmation will not change from the existing CBOEdirect environment.

Users will also be able to enter orders into CBOE*direct* via the GLOBEX Network. CME will route orders for SFs to CBOE*direct* through the Pipe using the CMi 2.0 interface.

CBOE*direct* will identify non-market makers by originator ID (acronym). This User ID will be carried from the point of order entry through the submission of executed trades to clearing and will be available to ONE as part of the audit trail. In addition, the system logs will identify the system log-in ID of the Order generator.

5.2.2.5 Order Maintenance

Users will be able to display order status, using filters supported by CBOE*direct*. From the Order Status window, the user will be able to cancel, update and cancel/replace orders. Section 4.2.2.4 describes the impact of specific cancel/replace actions on order book priority.

5.2.3 Quotes and Orders Sent to CBOEdirect

CBOE*direct* will process Quotes and Orders according to existing, pre-defined system parameters.

5.2.3.1 States of Operation

Five separate states will divide regular CBOEdirect operations. These states are:

- Pre-opening
- Opening Rotation
- Trading
- Halted
- Closed

In addition, the Fast Market State can be initiated according to pre-defined business rules or through System Administrator intervention. Specific rules related to Order entry apply to each state. These rules are outlined in the table in Section 4.2.3.1.

Note: In the event there is no underlying security to trigger the opening for SFs (as will be the case with narrow-based indexes or if the market is scheduled to open at a time other than 8:30 a.m. Chicago Time), the market states will transition to Pre-opening and opening rotation via a schedule provided ONE.

5.2.3.2 Market Display

CBOEdirect will provide the same degree of price transparency to system users for SFs as it currently provides for options. For each Contract, CBOE*direct* will show the following data in the Market Display in real time:

- Underlying Equity or Index
- Month ID
- Last Sale Price
- Market's Best Bid Price
- Market's Best Bid Quantity
- Market's Best Offer Price
- Market's Best Offer Quantity
- Trader's Best Bid Price
- Trader's Best Bid Quantity
- Trader's Best Offer Price
- Trader's Best Offer Quantity
- Trading Day's Opening Price
- Trading Day's High Price
- Trading Day's Low Price
- Last Sale Quantity
- Total Quantity Traded

The Market Display will show contingency order quantity according to existing parameters. A transaction snapshot of the underlying security, news alerts, and a sliding ticker with individual trades in the underlying will also be available.

5.2.3.2.1 Book Depth

Users will be able to display a summary of the market depth. The first n (5) levels of the book depth will dynamically update. The "order book depth" window will show the price and the total quantity bid and/or offered at each displayed price level. Contingency Orders will not be included in the quantity displayed.

The "order book depth" window will not differentiate quantity based upon the source of the Order.

5.2.4 CBOEdirect Matches Trades

5.2.4.1 Opening Procedures

The CBOEdirect opening will be divided into two phases: Pre-opening and the opening rotation.

5.2.4.1.1 Pre-opening

The pre-opening phase will be a n (30) minute period before the scheduled opening. Quotes and Orders may be entered but no matching occurs. CBOEdirect will display resting Orders in the book that remain from the prior trading day and any Orders and Quotes sent in before the opening rotation.

5.2.4.1.2 Opening Rotation Phase

The objective during the opening rotation phase is to open at a price that leaves no crossed Orders in the order book. The EOP is the price that results in the highest matched quantity. A standard Quote (i.e., a Quote that meets ONE's requirements for size and quote width) must be present for an opening trade to occur, and the EOP will only be calculated if an opening trade is possible. If no opening trade is possible, a zero will be disseminated.

When the market for the underlying security disseminates information with respect to that security, CBOE*direct* will enter the opening rotation phase. CBOE*direct* will send an opening notice to market makers in their assigned Products. Market makers will submit their opening Quotes. CBOE*direct* will set the starting time of the actual opening at a randomly selected time n (20-33) seconds after the receipt of the underlying security's opening price. The purpose of the random setting is to prevent market manipulation at the opening.

During the opening rotation phase, CBOE*direct* will accept Quotes and Orders and display them in the order book. After the first n (15) seconds of this phase, CBOE*direct* will begin to calculate and disseminate the EOP based on the Orders then-currently in the order book. This value will be re-calculated and disseminated by CBOE*direct* every n (2-3) seconds until the start of the opening rotation phase.

5.2.4.2 Matching Algorithm

CBOE*direct* will support both price-time priority (i.e., first in/first out at each price level) and price/time/pro-rata allocation for Security Futures. As an overlay on top of these algorithms, public Customer priority, market turner priority and LMM trade participation right priority can be applied. The matching algorithm used by CBOE*direct* will be configurable by Product. The LMM participation right will be utilized for all Products. CBOE*direct* will be able to apply any of the foregoing allocation methods to the execution of Orders (other than Spread Orders):

- Price-Time Priority
- Price/Time /Pro-Rata Allocation
- Public Customer Priority
- Market Turner Priority
- Trade Participation Right Priority

5.2.4.2.1 Contingency Orders

Contingency Orders will have the lowest execution priority in CBOE*direct*. Stop Orders and Stop Limit Orders will be available in CBOE*direct*.

Stop Orders will be executed at their full quantity once the market trades at, or is bid above or offered below, the stop price.
Stop Limit Orders will be executable once the market trades at, or is bid above or offered below, the stop price. The order matches until the complete quantity is satisfied, or the price reaches the limit price. CBOE*direct* will not disseminate information about these types of Orders. The CBOE*direct* user interface will show the presence of such Orders, but only to the trader who submitted it, in the "My Best" part of the "market display" window.

Quantities of Stop Orders and Stop Limit Orders will not be included in the "book depth display".

5.2.4.2.2 Spread Order Processing

CBOEdirect will support calendar spreads for SFs. These spreads will be integrated with the book in the manner spreads are currently handled by CBOE*direct*.

5.2.4.3 Closing Procedures

Trading in SFs will close at a specific time each day. Initially, the market close will occur at 3:02 p.m. (Chicago time). The market close time may be changed based on unusual or emergency circumstances, or may be modified on a long-term basis, as required by ONE from time to time. Once the market closes, CBOE*direct* will calculate a settlement price using a pre-defined algorithm. The Help Desk will manually over-ride system-defined settlement prices if instructed to do so by ONE. Requirements for calculating the settlement price are detailed in Section 7.

5.2.5 CBOEdirect Processes Matched Trades

After Orders match, fill reports will be sent by CBOEdirect back to the origination. On the CBOE*direct* GUI, fill reports will appear in the "My Trades Log" screen. Fills for Orders that arrive through COMPASS, CMi 2.0 or FIX will be confirmed through the appropriate API.

CBOEdirect will send trades to Trade Match for submission for clearing.

5.2.6 Market Data Dissemination

CBOE*direct* will disseminate price information for Security Futures to the processor selected by ONE, via the appropriate format, as described below. In addition, CBOE*direct* will provide users with real-time access to data. CBOE*direct* will not distinguish between users with respect to data availability, although only market makers will be able to view RFQs on CBOE*direct* and access to certain data may depend upon the particular system used by a user to access CBOE*direct*.

5.2.6.1 Ticker Symbol Convention

Ticker symbols for SFs will be up to 6 characters in length. Up to the first four characters will represent the ticker symbol for the underlying security. The next character will be a numeric designation of the contract specification, 0 through 9. The last character will represent ONE. The field will be left justified with no embedded blanks.

Examples:

IBM futures, 100 shares per contract **IBM1C**
Microsoft futures, 100 shares per contract **MSFT1C**

5.2.6.2 Designation of Expiration Month

Expiration month codes for SFs will follow the convention used in the futures industry. Month codes are as follows:

Symbol	Month
F	January
G	February
H	March
J	April
K	May
M	June
N	July
Q	August
U	September
V	October
X	November
Z	December

5.2.6.3 Last Sale

CBOEdirect will provide the following information for trades:

- Product Symbol
- Month ID
- Year ID
- Futures price denominator code
- Price
- Quantity
- Market Indicator

5.2.6.4 Quotes With Size

For bid/offer and size, CBOEdirect will provide the following information:

- Product Symbol
- Month ID
- Year ID
- Futures Price Denominator Code
- Bid Quote
- Bid Size
- Ask Quote
- Ask Size

5.2.6.5 Open Interest

CBOE will provide the following open interest information for each Contract:

- Product Symbol
- Month ID
- Year ID
- Prior Day's Open Interest Quantity

5.2.6.6 End of Day Summary

At the end of each trading day, when all information is available, CBOE will provide the following information for each Contract:

- Product Symbol
- Month ID
- Year ID
- Volume Quantity
- Prior Day's Open Interest Quantity
- Futures Price Denominator Code
- Opening Price
- High Price
- Low Price
- Last Price
- Net Change Indicator
- Net Change
- Underlying Price Denominator Code
- Underlying Stock Price
- Bid Quote
- Ask Quote

5.2.6.7 Settlement Price

At the end of each trading day, CBOE will provide the following information for each Contract:

- Product Symbol
- Month ID
- Year ID
- Settlement Price

5.2.7 Post Trade Processing

Each Clearing Member will be able to select the post trade processing facility it wishes to use (either CBOE's or CME's). The Exchange Identifier facility and Clearing Member number associated with the login ID that is utilized to submit trades will determine the post-trade processing facility.

Each Clearing Member will be able to correct non-critical match fields and allocate trades in the post-processing system that it selects. All trades are "locked in" at time of execution. After execution, either execution side may move the trade, using standard CMTA or GUS processing, to a different carrying firm. CME will validate give-up relationships.

5.2.8 Clearing Firm Systems

Clearing Members can request, and CTM will provide, outbound network transmissions from Trade Match to populate their internal bookkeeping systems. It is expected that similar functionality will be available in the CME's post-trade processing facility.

5.2.9 Clearing File

Regardless of where post-trade processing occurs, clearing firms may elect to carry positions at a clearinghouse other than the one associated with the post-trade processing facility. CBOE will create and maintain a table that stores and controls ONE clearing number for each firm.

5.2.10 Options Clearing Corporation

At the end of the trading day, Trade Match will send all trades to OCC for settlement and clearing. Critical fields cannot be modified after the trade is transmitted. The data sent to OCC and CME for each trade will include the items described in Section 7.17.2 of these Functional Requirements.

5.2.11 CBOE Back Office Systems

5.2.11.1 Membership

The CBOE Membership System will provide information about membership, ownership and individual trading rights. To support futures trading, a futures trading right will be added to the Membership System. The Membership System will feed information about members to the Billing System to enable billing by membership type. The Membership System will also provide information about CME and CBOE and CBOT members to CBOEdirect to control trading access privileges.

The Membership System will support a new Exchange ID.

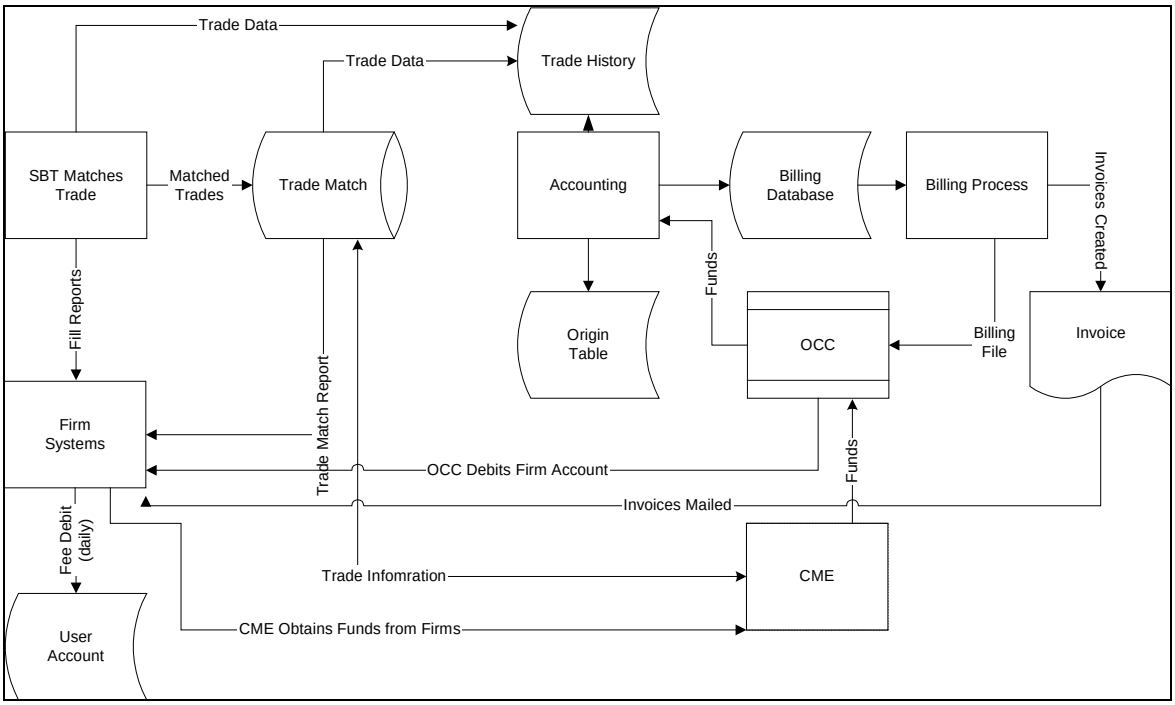
5.2.11.2 Trade History

Trade Match will send processed trade information to Trade History. This information will be logged and archived and used by CBOE back-office systems as the source for trade information.

The Data Warehouse will provide Quote, Order and trade history information to Market Data Retrieval for use by the Regulatory Systems and ONE. Seven (7) years of data will remain available to Regulatory Systems and ONE.

5.2.11.3 Billing Data

5.2.11.3.1 Billing Data Process Flow Diagram



5.2.11.3.2 Billing Data Process Flow Description

5.2.11.3.2.1 Matched Trade Occurs

- CBOEdirect will send trade data to Trade History via central database replication.
- CBOEdirect will send matched trades to Trade Match for post-trade processing and transmission to OCC and CME clearing. Trade details, including corrections and post-trade allocations, will be sent by Trade Match to Trade History.
- Clearing Members will be able to receive trade match report via outbound network requests.
- OCC will debit Clearing Member accounts for transaction fees on a daily basis.

5.2.11.3.2.2 Accounting Processes Trade Information

- CBOE Accounting will obtain trade information from Trade History.
- CBOE Accounting will determine trade "Origin".
- CBOE Accounting will determine fee based upon origin.
- CBOE Accounting will build a fee database daily and bill executing firms by origin.

5.2.11.3.2.3 Bills Generated

- On the night of the first business day of the month, CBOE Accounting will generate bills.
- Billing file will be transmitted by CBOE to OCC for funds.
- CBOE will mail detailed bills to OCC clearing firms. Billing detail will include product type (futures), origin, day, quantity and rate.

5.2.11.3.2.4 OCC Processes Billing

- On the fifth (5^{th}) business day of the month, OCC will debit firm accounts.
- On the fifth (5^{th}) business day of the month, OCC wires funds to CBOE for ONE account.

5.2.11.3.2.5 Transaction Fees

ONE will charge transaction fees to executing firms. Fees will be assessed per Contract, per side and will vary by Product and trader type. The billing system will use the following data to create invoices for each member firm:

- Product
- Trader Types
- Number of Contracts Traded

5.2.11.3.2.6 Special Processing for CME Firms

ONE Transaction Fees for non-OCC firms will be invoiced to the CME special account at OCC. OCC will transfer funds to ONE account. Billing detail will be provided to the CME for collection from the CME firms.

5.2.11.3.2.7 Regulatory

Regulatory Systems will continue to receive data from CBOEdirect, Trade Match, and Membership Systems. Regulatory Systems will receive final trade data from OCC. OCC and SIAC will feed required information to the CFTC.

Information gathered by the Regulatory Systems will include:

- Products assigned to a market maker
- ONE member firms
- 102 Form Data

- Relationships between two products
- Price formats
- Product types
- Products
- Contracts within each Product
- CBOEdirect users
- Trading sessions
- Exchange-defined quote spread width
- Exchange ID and related data
- Quantity available at bid price
- Trade counterparties
- CBOEdirect orders
- Order history
- CBOEdirect quotes
- Market data history (current market, last sales, opening price)
- RFQ history
- ILX data

5.2.12 CTI/Origin

CBOE will support new CME-specific Origin codes to enable CME to map CTI/Origin combinations to CBOE-supported origins.

The following table explains the current understanding with respect to CTI/Origin Mapping:

CTI/Origin Combination	**CBOEdirect-Origin**	**OCC-Origin**
CTI 1/Origin 1	V	M
CTI 1/Origin 2	E	F
CTI 1/Origin 5	Q	C
Firm and CTI 2/Origin 2	F	F
CTI 3/Origin 1	G	M
CTI 3/Origin 2	H	F
CTI 3/Origin 5	R	C
Customer and CTI 4/Origin 1	C	C
CTI 4/Origin 2	O	F
CTI 4/Origin 5	T	C
Broker Dealer CTI 4/Origin 1	B	C
Market Maker CTI 1/Origin 6	M	M
Market Maker Away CTI 4/Origin 6	N	M

ONE is working with OCC to establish the manner in which the positions of Customers whose positions are carried in a futures account will be segregated as required under the Commodity Exchange Act and the regulations of the CFTC thereunder. The manner in which ONE understands that this initially will be accomplished is as follows: Each Clearing Member that is an OCC member and that will carry positions of Customers in a futures account will be issued a unique firm number by OCC for use exclusively with respect to positions that are to be carried in a futures account. This unique number will be linked in CTM to broker acronyms specified by ONE Members. ONE Member's broker acronyms will be submitted in the information that is included in any Order to buy or sell Security Futures that are to be carried in a futures account.

6 Current vs. Future State Differences

This Section identifies certain differences between the existing CBOE*direct* operation and what is required to list SFs and for CBOE to provide matching services to ONE. The items identified in this section are described in greater detail in Section 7.

6.1 Access

6.1.1 Exchange Identifier

An Exchange Identifier will be added to the user and firm records, and carried through CBOEdirect and Trade Match, to identify which exchange the user or firm ID belongs to.

6.1.2 Support CME and CBOT Users

CBOEdirect will allow CME and CBOT users to access SF products while preventing unauthorized users from accessing CBOE-only products.

6.1.3 Support CME Members via CMi 2.0

CME order flow will be sent in the CMi 2.0 format to CASs located in the CBOE data center. CBOE*direct* will be able to accept orders from multiple CME members via this environment.

6.1.4 Futures Eligibility

CBOE will modify the Membership System to support the Exchange Identifier and to establish eligibility to trade futures.

6.2 Product Maintenance

CBOE will modify the SA GUI to enable the Help Desk to add and maintain Products. The CBOE's TPF system will not support Products.

6.3 Quote and Order Entry

These are the essential differences between CBOEdirect, as it is configured for stock options, and the requirements to support futures trading, in regard to Quote and Order entry:

6.3.1 Put/Call Indicator not required for futures contracts

There is no put/call indicator for a futures contract.

6.3.2 Futures Calendar Spreads

Spreads supported for electronic trading of futures are limited to calendar spreads between two (2) Expiration Months of a particular Product. Futures calendar spread prices may be represented as either positive or negative numbers.

6.3.3 Contingency Orders

Implementation of Stop Orders and Stop Limit Orders will be necessary to support electronic trading of SFs.

6.3.4 Market Display

For futures contracts, the market display window will not contain the strike price or put/call indication.

6.3.5 Dynamic Book Update

The book depth will update dynamically, up to n (5) price levels deep.

6.3.6 Customer Account Number Required

To meet CFTC requirements, the customer account number is required at the time of order entry. This field will take the place of the sub-account field in the configuration of CBOE*direct* for CBOE's own products. For LMMs and market makers that are CBOE members, the market maker acronym will be inserted on a default basis in the Market Maker profile.

6.3.7 Support for Additional Origins Required

CBOE will support new CME-specific Origin codes to enable CME to map CTI/Origin combinations to CBOE-supported origins.

6.3.8 Support for Block Trading

ONE will permit Block Trading. Users may pre-negotiate transactions greater than or equal to n contracts outside of CBOEdirect. A facility to submit such transactions to OCC and CME will be developed by CBOE.

6.3.9 Support for Exchange for Physicals (EFPs)

ONE will permit EFPs, which involve simultaneous purchase of futures and sale of physical securities or simultaneous sale of futures and purchase of physical securities. Users may negotiate these transactions outside of the trade engine. There is no limit on the number of contracts that can be executed as an EFP. A facility to submit such transactions to OCC and CME will be developed by CBOE.

6.3.10 Support COMPASS Futures Format

CBOE*direct* will support the COMPASS Futures Order/Reports Formats.

For futures, orders will go directly from COMPASS to CBOE*direct.* TPF will not handle futures orders. CBOE*direct* will require an adapter from COMPASS to the server.

CBOE*direct* will send error messages resulting from COMPASS orders to a printer located at the Help Desk.

6.4 Daily Settlement Price Calculation

At the end of trading, a settlement price for each Contract having open interest will be calculated and disseminated to the processor selected by ONE, to CME and to OCC.

6.5 CBOEdirect Trade Matching

CBOE will develop a separate database in CTM to handle futures. CBOE*direct* will interface with this separate database.

6.6 Price Dissemination

For futures, CBOE will disseminate quote and last sale data as a separate feed to a new infrastructure using the "OPRA-like" futures format that has been agreed to.

In addition to quote and last sale, CBOE will send to the processor selected by ONE daily "Open Interest", "Settlement Price" and "End of Day Summary" messages.

TIPs will accept SF prices from the processor selected by ONE for display on the CBOE floor.

6.7 Clearing

This section provides a high level outline of the current vs. future state differences for clearing trades. Section 7 of this document provides clarification and detail about each of these items.

6.7.1 Clearing Fields Not Supported

OCC will not support the following fields for clearing of SFs:

- Put/Call Code
- Expiration Day
- Strike Price Decimal
- Strike Price Fraction
- OPRA Code for Month and Strike
- Premium Currency
- Cabinet Trade Indicator

6.7.2 New Clearing Fields Supported

The following fields will be required for clearing of SFs:

- Account Number
- Exchange for Physical Indicator
- Block Trading Indicator
- ONE Clearing Firm Number

6.7.3 Support CME Clearing

Both OCC and CME will clear SFs. CME positions will net into a special account at OCC. To support CME Clearing, Trade Match will send a copy of every trade, and every trade update, executed for ONE to the CME. CME will, in return, send a copy of every trade update, which occurs on its system.

6.7.4 Support OCC Clearing of Transactions Post-Trade Processed at CME

OCC members may elect to conduct post-trade processing and bookkeeping using the CME's systems and carry their positions at OCC. CBOE will maintain a table that pairs clearing firms with executing firms. Trade Match will populate the "Clearing Firm" field every time it receives a new or updated trade record.

6.8 Regulatory

The SEC regulates stock options. The CFTC regulates futures. Both will regulate SFs. Since ONE will be designated as a contract market, ONE will need to establish a reporting relationship with the CFTC.

6.8.1 Regulatory Reporting

CBOE will generate regulatory reports as specified in Section 9.

6.8.2 Regulatory Services

ONE and CBOE contemplate that CBOE will perform regulatory activities for ONE, but the description of CBOE's functions is outside the scope of this document.

6.9 Billing

ONE will have members who are not OCC members. CBOE Accounting will provide the CME with billing detail for transactions in the OCC CME special account.

Security Futures billing will include transaction fees, by origin, only.

6.10 Historical Data

CBOE will modify the Data Warehouse to support the modifications required for Security Futures. In addition, a daily open interest file must be provided to CBOE*direct*.. Data sources and data vendors to be captured include:

- ONE_Main session data from CBOE*direct*
- Trade History from CTM and CBOE*direct*
- Large Trade Data from SIAC
- ICS Data from CBOE*direct*
- ILX Data from ILX
- OCC Data from OCC
  --Compliance Tape
- Membership Data (Clearing Table)

This data will be retained by Regulatory Systems for a period of seven (7) years.

6.11 Service Levels

As a service provider to ONE, the CBOE will be required to meet contracted service level agreements ("SLAs") as provided in the Agreement. A method to track and report system performance against these SLAs will be developed by CBOE.

7 Business Requirements

This section defines additional business requirements to support trading SFs on CBOE*direct* and the changes and enhancements to CBOEdirect and related systems required for CBOE to provide matching services to ONE.

7.1 Access Requirements

7.1.1 Exchange Identifier

In order to maintain uniqueness among ONE member acronyms and firms, as well as to support downstream processes, an "Exchange Identifier" will be supported. This identifier will be paired with user and firm records in the CBOE membership system and will be passed to CBOE*direct* as part of the membership download.

Trade Match will also support an Exchange Identifier, and will use this indicator to identify the post-trade processing destination for SF trades matched by CBOE*direct.* A CBOE member, using CBOE*direct,* may elect to establish a user ID with a CME Exchange Identifier in order to facilitate post-trade processing at the CME. These user IDs will be used for trading SFs only. Conversely, a CME (or CBOT) member, using GLOBEX, may elect to enter SF Orders associated with a CBOE Exchange Identifier so it may conduct post-trade processing at CBOE.

The convention for Exchange Identifiers is outlined in the table below:

Exchange	Membership Identifier
Chicago Board Options Exchange	CBOE
Chicago Mercantile Exchange	CME
Chicago Board of Trade	CBOT

7.1.2 Product Permissioning

ONE will require new permissioning requirements for the CBOE environment. This section details those requirements.

7.1.2.1 Non-CBOE members

Users of ONE, who are not members of the CBOE, may enter orders and quotes for ONE sessions only. CBOEdirect will deny access to any CBOE sessions to non-CBOE members.

CBOE members who have elected to conduct post-trade processing at CME will be required to utilize separate logins to trade CBOE-only products.

7.1.2.2 Futures Eligibility

CBOE will modify the Membership System to support a futures eligibility indicator. It is assumed that members currently entered in the Membership System are not eligible to trade futures until they have satisfied the eligibility criteria. Once the criteria are satisfied, CBOE's membership department will set a flag for CBOEdirect making a member "futures eligible". This flag must be set to grant a Member access to futures on CBOE*direct*.

7.1.3 Support CME Members via CMi 2.0

The CME will connect to CBOE*direct* via the CMi 2.0 Interface. The CASs supporting CME will be able to accept Orders and Quotes from multiple CME firms. Orders from CBOE member firms may also be entered

via the CME CASs, in which case CME must provide the appropriate CBOE Exchange Identifier. CBOE will provide programming support to CME to assist in establishing the CMi 2.0 interface.

The requirements for connecting to CMi 2.0 are available in the CMi 2.0 Programmer's Guide**,** the CAS Programmer's Guide, and the IDL Reference Document that are available on-line at the API site at www.cboedirect.com.

7.2 Maintenance of Security Futures

CBOE's TPF system is not being modified to support futures. The TPF system currently provides the product download to CBOE*direct.* CBOE will develop a product maintenance screen within the SA GUI to support the trading of SFs. The Help Desk will be responsible for entering product data into CBOEdirect.

7.2.1 New Product Additions

At least one (1) day prior to the listing of a new Product, the Help Desk will use the SA GUI "product maintenance" window to set up the Product. CBOEdirect must support the following process:

- Help Desk selects a screen to edit products
- Screen allows Help Desk to enter:
  --New symbol for Product
  --Date of trading activation
  --Identify underlying stock or index
  --Contract multiplier
  --Fee indicator
  --Last Trading Day/Expiration Date
  --First Notice Day
- The Help Desk staff enters appropriate data in all fields. Syntax checks are performed on each field to ensure that data conforms to required formats.
- Help Desk saves entered information.
- CBOEdirect validates the entered data.
- CBOEdirect saves the data persistently.
- A reporting class will be created per the OPRA futures symbology convention
- A Series Add file will be provided to OCC

7.2.2 Existing Product Maintenance

The Help Desk will be able to use the SA GUI to support the ability to change attributes of existing Products according to the process described above.

7.2.3 Adjustments for Corporate Actions

CBOE*direct* will adjust Orders in response to corporate actions consistent with existing option order adjustments. In the event of special cash dividends, CBOE*direct* will cancel any Good-'Til-Canceled Orders and users will be required to reenter Orders with the correct price.

7.3 Product Features

ONE will provide the following "Business Rule" parameters for each Product listed for trading. (Stock futures will have the features described under "Requirements" unless otherwise specified by ONE.)

Business Rule	Requirement
Underlying	100 shares of the underlying security
Price Basis	Dollars and cents.

Tick Size	$0.01
Daily Price Limits	Not applicable. Trading will halt in all stock futures contracts when applicable circuit breakers are in effect or in event of a halt of the underlying security.
Contract Months	Four contract months
Last Trading Day	The trading day preceding the expiration date.
Expiration Date	Saturday immediately following the third Friday of the Expiration Month.
Settlement	Physical delivery
Trading Hours	8:00 a.m. until 3:02 p.m. (Chicago Time) Monday through Friday.
Ticker Symbol	Six (6) character symbol designating underlying security, contract specification and Exchange.

7.4 Products Listed

Initially, ONE plans to list Security Futures on at least the top 50 most actively traded stocks, and potentially on narrow-based indexes. Following the initial implementation of the ONE futures market, ONE will review its Product list periodically. ONE will be able to list additional Products and de-list inactive Products. Products may be added by ONE with one (1) day advance notice to the CBOE. The Help Desk will enter new products into CBOEdirect at the direction of the appropriate ONE representative.

7.5 Spread Listing

Calendar spreads will be available for each Product. (A calendar spread is the simultaneous purchase and sale of two Contracts within the same Product.)

Spread Orders are integrated with the books of the individual instruments. However, CBOEdirect will assure that the spread legs are executed in pairs. Inter-market spreads (spreads between two (2) different Products) are not supported.

CBOE*direct* will maintain a book for every spread product, with the "same" orders on one side and the "opposite" orders on the other. The orders in each group will be sequenced in price from the most negative at the top (best) to the most positive (worst) at the bottom.

In trading with an incoming spread order at the same execution price, resting regular orders have a higher priority than resting spread orders. CBOEdirect will monitor the changes to the market of the legs of a given spread to see if the legs can all be filled.

7.6 Market Maker Quote and Order Entry

7.6.1 Quote Entry

Market Makers may enter Quotes in assigned Products. The following table indicates the fields passed through upon quote entry:

Field Name	Required Field	Defaults Available?
Contract ID (includes Product and Expiration Month)	Yes	Yes
Price	Yes	Yes
Side • Buy • Sell	Yes	No

Quantity	Yes	Yes
Executing Firm	Yes	Yes
Broker Acronym	Yes	Yes
Exchange Identifier	Yes	Yes
MM Account Field	Yes	Yes
Optional Data Field	No	Yes

7.6.2 Order Entry

Market makers may enter Orders for any Product. The following order types will be available:

- Limit
- Market
- Spread
- Contingency

The following table indicates the fields passed through when a market maker enters an Order:

Field Name	Required Field	Defaults Available?
Contract ID (includes Product and Expiration Month)	Yes	Yes
Side • Buy • Sell • Spread	Yes	No
Price	Yes	Yes
Quantity	Yes	Yes
Contingency • Stop • Stop Limit • AON • FOK • IOC	No	Yes
Time In Force • Session • GTC	Yes	Yes
Executing Firm	Yes	Yes
Broker Acronym	Yes	Yes
Exchange ID	Yes	Yes
Floor Broker ID	No	No
Account Number	Yes	Yes

7.7 Non-Market Maker Order Entry

Non-market makers may enter orders for any Product. CBOEdirect will support entry of limit, market, contingency and spread orders. The table below outlines the fields passed through CBOEdirect when orders are entered:

Field Name	Required Field?	Defaults Available?

Field Name	Required Field?	Defaults Available?
Contract ID (includes Product and Expiration Month)	Yes	Yes
Side • Buy • Sell	Yes	No
Price	Yes	No
Quantity	Yes	Yes
Time in Force • Day • GTC	Yes	Yes
Contingency • Stop • Stop Limit • AON • FOK • IOC	No	Yes
Origin • Customer (Also CTI 4/Origin 1) = C • Firm (Also CTI 2/Origin 2) = F • Broker Dealer = B • Market Maker = M • Customer Broker-Dealer = X • CTI 1/Origin 1 = V • CTI 1/Origin 2 = E • CTI 1/Origin 5 = Q • CTI 3/Origin 1 = G • CTI3/Origin 2 = H • CTI 3/Origin 5 = R • CTI4/Origin 2 = O • CTI 4/Origin 5 = T	Yes	Yes
Branch Sequence Number	No	Yes
Executing Firm	Yes	Yes
Broker Acronym	Yes	Yes
Exchange ID	Yes, for SF	Yes
Correspondent Firm ID	No	Yes
CMTA Clearing Member ID	No	Yes
CMTA Clearing Member Exchange ID	No	Yes
Floor Broker ID	No	Yes
Account Number	Yes	Yes
Optional Data	No	Yes

7.8 Support for Stop/Stop Limit Orders

Stop and Stop Limit order types are required for Security Futures and will be supported by CBOEdirect.

7.8.1 Stop Orders

A stop order to buy becomes a market order when the Contract trades or is bid at or above the stop price. A stop order to sell becomes a market order when the Contract trades or is offered at or below the stop price.

CBOEdirect will accept this type of order at any time. CBOEdirect will not disseminate information about this type of order. The CBOEdirect user interface will show its presence, only to the trader who submitted it, in the "My Best" part of the market display.

Quantities of stop orders will not be included in the book depth display.

7.8.2 Stop Limit Orders

A stop limit order has two (2) prices, the stop trigger price and the limit price. A stop limit order to buy becomes a limit order at the limit price when the Contract trades or is bid at or above the stop trigger price (first price). A stop limit order to sell becomes a limit order at the limit price when the Contract trades or is offered at or below the stop trigger price (first price).

CBOEdirect will accept this type of order at any time. CBOEdirect will not disseminate information about this type of order. The CBOEdirect user interface will show its presence, only to the trader who submitted it, in the "My Best" part of the market display.

Quantities of stop limit orders will not be included in the book depth display.

7.9 Support Compass Futures Order/Report Formats

TPF will not be modified to support SFs. Firms currently connected to CBOE via the COMPASS interface will be able to utilize those connections to route Orders for SFs.

CBOE will develop an adapter that enables COMPASS to interface directly with CBOE*direct.* Firms will be able to establish new logical devices and write to the COMPASS Futures Order/Report Formats.

CBOE*direct* will support the following new formats:

- Inbound Order/Cancel/Replace formats
- Execution report formats
- UR OUT formats
- Nothing done formats

Spread order entry via COMPASS will not be supported for the launch of SFs.

When CBOE*direct* cannot process a message received by COMPASS, it will return an error to a printer located in the Help Desk area. The Help Desk will be responsible for informing the originating firm of the error condition.

7.10 Dynamic Book Update

A user request to display the book for a Contract will subscribe the user to dynamic book updates of the first n (5) price levels for that Contract. The book depth window will show the price and the total quantity bid and/or offered at each displayed price level. The quantity of contingency Orders will not be included in the quantity displayed.

Book Depth display can be configured at Session and Class level. It must be subscribed to at the product level, only.

The book depth display will not differentiate quantity based upon origin.

7.11 System Operator/Administrator Functions

This section outlines the CBOEdirect System Operator/Administrator functions that are specific to SFs. CBOEdirect-specific functionality, such as starting/stopping CBOEdirect, will not be affected by the addition of SFs.

7.11.1 Market Control Functions

7.11.1.1 Market Status

The System Administrator will be able to stop and start trading by Product or by Contract. System administrator actions to start or stop trading by Product will affect all Contracts in that Product. The system administrator will also be able to change market status by Product or by Contract.

A system schedule will be provided by ONE to enable the System Administrator to program market openings and closings in advance.

7.11.1.2 User Maintenance

The System Administrator will be able to permission users for futures trading. CBOE will provide the capability to add, change and delete such users.

The System Administrator will maintain market maker profiles that contain market makers' clearing information.

System Administrator functionality to enter, update and display market maker appointments (provided via an interface with the external MPP system) will be extended to provide market maker assignments for futures.

7.11.1.3 Report Block Trades

ONE will allow the execution of pre-negotiated SF Block Trades. Block Trades are executed outside of CBOEdirect and reported to CBOEdirect after the execution. ONE will define a minimum size requirement of n (200) Contracts (configurable at the Product level) that can be reported as a Block Trade. For the initial release of CBOE*direct* for SFs, the Help Desk will be responsible for entering these trades into CBOEdirect.

A window will be developed by CBOE for the SA GUI that facilitates the reporting of Block Trades. This window will allow the Help Desk representative to enter the following information:

Field Name	Required Field
Session ID	Yes
Contract ID (includes Product and Expiration Month)	Yes
Price	Yes
Quantity	Yes
Block Trade Indicator	Yes
Execution Time	Yes
Trade Date	Yes
Buy Executing Firm	Yes

Field Name	Required Field
Buy Executing Firm Exchange Indicator	Yes
Buy Broker Acronym	Yes
Buy Broker Exchange ID	Yes
Buy Origin	Yes
Buy Customer Account Number (Sub-Account)	Yes
Buy Account	No
Buy CMTA Firm	No
Buy CMTA Exchange ID	No
Buy Open/Close Indicator	No
Buy Correspondent ID	No
Buy Optional Data	No
Buy Originator	No
Sell Executing Firm	Yes
Sell Executing Firm Exchange ID	Yes
Sell Broker Acronym	Yes
Sell Broker Exchange ID	Yes
Sell Customer Account Number (Sub-Account)	Yes
Account	No
Sell Origin	Yes
Sell CMTA Firm	No
Sell CMTA Firm Exchange ID	No
Sell Open/Close Indicator	No
Sell Correspondent ID	No
Sell Optional Data	No
Sell Originator	No

Once the required information is entered into CBOEdirect, CBOE*direct* will generate a trade report to CTM, with an indicator flagging the transaction as a Block Trade. All other interfaces including Trade History, Regulatory Systems and Billing Systems, and COPP will receive updates as well.

Note: The following system rules apply to Block Trades:

Bustable = True
Trade Date = Business Date
Reinstatable (After Bust) = False
Database Keys for Order and Quote do not apply

7.11.1.4 Report EFP Transactions

ONE will allow the execution of pre-negotiated SF EFPs. EFPs will be executed outside of CBOEdirect, and will be reported to CBOEdirect after the execution. There will be no minimum size requirement. For the initial release of CBOE*direct* for SFs, the Help Desk will be responsible for entering these trades into CBOEdirect.

A window will be developed by CBOE for the SA GUI that facilitates the reporting of EFPs. This window will allow the Help Desk representative to enter the following information:

Field Name	Required Field
Session ID	Yes
Contract ID (includes Product and Expiration Month)	Yes
Price	Yes
Quantity	Yes
EFP Indicator	Yes
Execution Time	Yes
Trade Date	Yes
Buy Executing Firm	Yes
Buy Executing Firm Exchange ID	
Buy Broker Acronym	Yes
Buy Broker Exchange ID	Yes
Buy Origin	Yes
Buy Customer Account Number (Sub Account)	Yes
Buy Account	No
Buy CMTA Firm	No
Buy Open/Close Indicator	No
Buy Correspondent ID	No
Buy Optional Data	No
Buy Originator	No
Sell Executing Firm	Yes
Sell Executing Firm Exchange ID	Yes
Sell Broker Acronym	Yes
Sell Broker Exchange ID	Yes
Sell Customer Account Number (Sub Account)	Yes
Sell Account	No
Sell Origin	Yes
Sell CMTA Firm	No
Sell Open/Close Indicator	No
Sell Correspondent ID	No
Sell Optional Data	No
Sell Originator	No

Once the required information is entered into CBOEdirect, CBOE*direct* will generate a trade report to CTM, with an indicator flagging the transaction as an EFP. All other interfaces including Trade History, Regulatory Systems and Billing Systems, and COPP will receive updates as well.

Note: The following system rules apply to EFPs:

Bustable = True
Trade Date = Business Date
Reinstatable (After Bust) = False
Database Keys for Order and Quote do not apply

7.11.1.5 Product Maintenance

The system administrator will be able to maintain class groups that include futures. Requirements for product maintenance are described in Section 7.2 of this document.

7.11.1.6 Order Maintenance

If a user connected to CBOE*direct* experiences technical difficulties that prevent it from acting on its Orders, the user will be expected to use a Clearing Member's master terminal (i.e., CBOEdirect Firm Terminal) to manage the user's order book. If the master terminal is not available or is not operational, the Help Desk will serve as a contact of last resort to provide Order and trade status reports and to cancel Orders.

The System Administrator will have the ability to cancel all Orders in CBOEdirect on behalf of a user technically unable to cancel its own Orders by disabling that user in CBOEdirect. CBOEdirect will attribute this cancel request in the system logs to the CBOE employee who performed the cancel.

Note that before canceling orders, the System Administrator must confirm the identity of the user. A cancel acknowledgement will be generated and provided to the user upon successful login by that user.

In the event a user is unable to cancel individual Orders, Help Desk staff will be required to log in as that user to cancel individual Orders. Cancels performed in this manner will be attributed to the user who entered them, not to the Help Desk representative who performed the cancel request. The Help Desk will not enter Orders.

7.11.1.7 Trade Bust

The System Administrator will be able to bust trades. The Help Desk performs the following procedure:

- Bust the trade in CBOE*direct*
- Notify all parties involved
- Disseminate cancellation information in prescribed "OPRA-like" format
- Coordinate a resolution to the problem trade by attempting to re-establish Orders and their respective priorities in the book on a best-efforts basis.

The ONE Trade Bust policy will regulate the manner in which the CBOE Help Desk bust trades.

ONE will establish a pool of participants who have no interest in the Product. They are expected to run their autoquote engines for the Products assigned to them for this purpose, so they can readily respond with a theoretical price when called upon by the Help Desk.

Alternately, ONE may provide the Help Desk with tools to calculate the theoretical prices of these products.

7.11.1.7.1 Reinstatement of Orders in a Busted Trade

Given a Trade ID, CBOEdirect will provide the Help Desk with a display of all the orders that are involved in a trade. The Help Desk can enter whether the contra-party agreed to bust or not, the trade quantity to bust, and whether that quantity is to be reinstated or not. The bust/reinstate transaction will be attempted as a single operation, although if problems were encountered in the reinstate step, only the bust step would be completed.

The following Orders will be not be reinstated:

- Order of party requesting the bust
- Market Order
- Order that was originally one side of a quote

- Contingency Order

A reinstated Order will be handled like any incoming Order, but it retains its original entry time. If it locks or crosses the ONE market it will execute against opposite Orders in the book; otherwise it will go into the book in price/time priority. If it is first in time priority at the insertion price level and market turner priority is turned on, the Order will receive market turner priority. If there is a market turner Order at the same price level, of lower time priority, that Order will lose its market turner status.

7.11.1.7.2 Bust of Spread Trades

Support for busting spread trades is not available in CBOEdirect. Traders wishing to get out of positions due to a spread trade in error will be required to trade out of those positions.

7.11.1.8 Enter Settlement Price

At the end of each trading day, CBOEdirect will generate a settlement price for each Contract having open interest. These prices will be generating using an algorithm provided by ONE (the initial algorithm for Security Futures on single stocks is described in Section 7.12.2.1 below), subject to OCC's rules. Settlement pricing algorithms for Security Futures on stock indexes will be determined in conjunction with the relevant Product specifications. CBOE*direct* will provide functionality to enable the Help Desk to enter and modify settlement prices for all Contracts listed for trading. This functionality will include a window displaying:

- Underlying security
- Expiration Month
- Previous day's open interest
- Previous daily settlement price

A field will be provided for entry of the current day's settlement price. Once entry of settlement prices is complete, a settlement price message will be sent to COPP for distribution to the processor selected by ONE in the appropriate format. CBOE will also provide the settlement price to OCC and CME in the OCC Futures Price Exchange Record Layout.

If the automated process generates settlement prices that are unacceptable to ONE, the Help Desk will manually override settlement prices in CBOE*direct* at the end of each trading day.

7.11.1.9 System Administrator Display

The following SA GUI displays will include, where appropriate, futures:

- Assigned market makers
- Un-responded RFQs
- Trader preferences—Quote Risk Management
- Trade log

This display will not include window preferences. Displays will not dynamically update.

7.11.1.10 Test Products

The system administrator will be able to test CBOEdirect functionality using test SF-like products. These test products will allow the Help Desk to confirm normal operation of CBOEdirect before each day's opening. Test product activity will not generate a trade report to the CME or to the OCC (or to back office systems).

7.12 Opening and Closing Procedures

7.12.1 Opening

There will be a n (5-45) minute pre-opening phase. Upon receipt of the opening trade or opening Quote in the underlying security, an Opening Notice will be issued to the market makers. Market makers will submit opening quotes.

The market will open at a randomly selected time between n (20-33) seconds after the opening notice is sent.

7.12.2 Closing

Futures will close according to a predefined schedule. After the close, a process will generate a settlement price using a formula established by ONE. Once the settlement price is final, it is sent to the processor selected by ONE and to OCC.

7.12.2.1 Daily Settlement Price Calculation

At the end of trading, a settlement price for each Contract having open interest will be calculated and disseminated to the processor selected by ONE.

The rules initially established by ONE for calculating the settlement price are as follows. If ONE wishes to modify the settlement price algorithm, such modification will be subject to a Change Order.

7.12.2.1.1 Initial Algorithm for Daily Settlement Price Calculation for Day in Which Trades Occur

If the last trade price is equal to or in-between the final bid and offer of the day, the last trade price will be used to populate the settlement price.

If the last trade price is lower than the final bid price, the final bid price will be used to populate the settlement price.

If the last trade price is higher than the final offer price, the final offer price will be used to populate the settlement price.

7.12.2.1.2 Initial Algorithm for Daily Settlement Price Calculation for Day in Which No Trades Occur

If there is no last trade price, an alternate approach must be used to calculate settlement price. In such a case, the previous day's settlement price will be used in lieu of the last trade price to determine the current day's settlement price.

If the previous day's settlement price is lower than the final bid price, the final bid price will be used to populate the settlement price.

If the previous day's settlement price is higher than the final offer price, the final offer price will be used to populate the settlement price.

7.12.2.2 Daily Settlement Price Calculation Under Special Circumstances

If trading is halted for one or more Contracts, but trading in the underlying securities continues, or if trading in any security underlying a particular Contract is halted after an opening market price has already been disseminated for that Contract, the daily settlement price will be determined in accordance with the Rules, subject to OCC's rules.

7.12.2.3 Final Settlement Price Calculation

The final settlement value will be the price of the underlying stock at the close of trading of the SFs or at a configurable time determined by ONE.

If trading is halted for a Contract, on the day of final settlement, and trading in the underlying security on the primary exchange continues, the final settlement value will be the price of the underlying stock at the close of trading of the Contract on ONE or at a time determined by ONE.

If trading is halted in the underlying stock, on the day of final settlement, the settlement price will be the next available opening price of the underlying stock. Settlement will be delayed until the opening of the underlying stock and will be manually entered into the system by an ONE designee. If it is determined that the stock will not resume trading, ONE will determine the final settlement price. In this case, the settlement price will be manually entered into CBOEdirect.

These provisions with respect to final settlement price are subject to OCC's rules.

7.13 Billing Requirements

7.13.1 Transaction Fees

ONE will establish fees for SFs for the following Origins:

Origin	Fee
Customer	TBD
Market Maker	TBD
Firm	TBD
Customer Broker/Dealer	TBD
Broker	TBD

7.13.2 Processing for OCC Cleared Transactions

Billing process will be as described in Section 5.2.11.3.2. CBOE will credit the amounts that it collects to an account designated by ONE.

7.13.3 Processing for CME-Cleared Transactions

CME-cleared trades will be processed at OCC in a special clearing account. OCC will treat the CME as a special firm for clearing and for billing. CME's OCC account will be billed for transactions for CME-cleared trades. CBOE will provide CME with billing detail indicating Product, origin, day, rate and CME clearing firm. CBOE will provide this data to CME via FTP.

7.14 Regulatory Reporting Requirements

7.14.1 Trading Volume, Open Contracts, Prices and Critical Dates

ONE is required to submit, to the CFTC, a daily report detailing trading volume, open interest, prices and critical dates. This report will be provided electronically and in a hard copy format by 3:00 p.m. Central Time. and include information pertaining to the previous trade day. CBOE will provide to OCC and ONE, on a daily basis, information necessary for OCC to generate this report. The report will be generated daily by OCC and will show:

For each Product
For each Expiration Month
Trading Volume and Open Contracts
- Change in open interest from prior day
- Total volume of trading
- Total quantity of Contracts bought and sold in EFP transactions included in total volume
- Total gross open interest (excluding deliveries)
- Total deliveries tendered and stopped

Prices
- Daily low price
- Daily high price
- If no transactions, a nominal closing price, clearly indicating the price is nominal
- Settlement price

Critical Dates
- First notice day
- Last trading day

7.14.2 Audit Trail Capability

The audit trail capability provided by CBOE*direct* will include specialized electronic surveillance programs to identify potentially abusive trades and trade patterns, including but not limited to withholding or disclosing Customer Orders, trading ahead, and preferential allocation. The audit trail capability will be able to track a Customer order from time of receipt into CBOE*direct* through fill allocation or other disposition. CBOE*direct* will create and maintain an electronic transaction history database that contains information with respect to transactions executed on the Exchange.

The audit trail capability will maintain original source documents, consisting of unalterable, sequentially identified records on which trade execution information is originally recorded. For each Customer Order (whether filled, unfilled or cancelled, each of which will be retained), such records reflect the terms of the Order, an account identifier, and the time of Order entry.

The audit trail capability will maintain transaction history, consisting of an electronic history of each transaction, including (a) all data that are input into CBOE*direct*'s trade entry and matching systems for the transaction to match and clear; (b) the categories of participants for which such trades are executed, including whether the Person executing a trade was executing it for his/her own account or an account for which he/she has discretion, his/her Clearing Member's house account, the account of another member, or the account of any other Customer; (c) timing and sequencing data adequate to reconstruct trading; and (d) the identification of each account to which fills are allocated.

The audit trail capability will include an electronic analysis capability that permits sorting and presentation of data included in the transaction history so as to reconstruct trading and to identify possible trading violations with respect to both Customer and market abuses.

The audit trail capability will include safe storage capability that provides for a method of storing the data included in the transaction history in a manner that protects the data from unauthorized alteration, as well as from accidental erasure or other loss in a manner consistent with the requirements of CFTC Regulation 1.31.

7.15 Price Dissemination

7.15.1 Market Data

For each Contract, CBOE will provide the following information for dissemination to market data processor designated by ONE:

- Commodity Code
- Expiration Month Code
- Expiration Year Code
- Last Trading Date Day Code
- Last Trading Date Month Code
- Last Trading Date Year Code

7.15.1.1 Price Information

For each price message that is disseminated, CBOE will provide the following information for dissemination to the market data processor designated by ONE:

- Price ID
- Futures Price Denominator Code
- Price
- Price Sign
- Designation of Bid, Ask, or Trade

CBOE will provide the following additional information for dissemination to the market data processor designated by ONE as appropriate:

- Volume Traded
- Bid/Ask Size
- Open Interest
- Market Condition Indicators (i.e., Fast, Trading, Halt, etc.)
- High/Low/Last
- Settlement Price

7.16 Post Trade Processing

CBOE*direct* will send all matched and busted transactions to Trade Match. Trade Match will send a copy of each transaction to the CME's post trade processing system. Updates to trades in Trade Match will be sent to the CME. Updates in the CME post-trade processing system will be cent to Trade Match.

Each Clearing Member will be able to correct non-critical match fields in the post-trade processing system that is supported by that Clearing Member's supported by the user ID. In Trade Match, corrections may be made via an ITP screen or through batch correction. All trades are "locked in" at time of execution. After execution, either execution side may move the trade, using standard CMTA or GUS processing, to a different carrying firm. CME will validate give-up relationships.

7.17 Clearing

Clearing Members conducting post-trade processing at CME may elect to carry their trades at OCC, and Clearing Members conducting post-trade processing at CBOE may elect to carry their trades at the CME, but trades of a particular Clearing Member will be carried at only one clearing organization. To facilitate this clearing "flip", the following process is required:

- CBOE will create a table indicating the clearing ID of the executing firm and the clearing ID of the Clearing Member. This table will be able to be accessed on-line and be able to be updated. ONE will

provide CBOE with the information to facilitate entry into the CBOE Membership System. A sample of a table entry follows. In this example, Merrill Lynch has elected to conduct post-trade processing at the CME, but wishes to carry positions at OCC.

FROM (Executing Firm)	TO (Clearing Firm)	Effective Date	Note*
M 560	B 161	3/1/2001	

*For administrative control procedures.

- Before each trading session, CBOE will transmit a copy of this table to CME to be used in the clearing process.
- CBOE will make available a reprocess procedure, to be used in the event of late table updates. This procedure will reevaluate clearing sweeps for all trades occurring in a given day. This procedure must be run prior to submission of trades to the clearinghouses on any day in which it is known that the table was inaccurate.

7.17.1 Clearing Entity

Trade Match will send futures trades to OCC for clearing. The CME will also provide clearing services for its members and for members of the CBOT who are not members of OCC.

Both CBOE and CME will develop a clearing file creation process to transmit all trades to the OCC in the SF record format. Both exchanges will develop transmission capabilities to OCC for transmission of this file. This will provide a back-up facility, in the event CBOE is unable to send trades to OCC.

7.17.2 Clearing Requirements

The following data will be submitted to OCC and CME to support clearing futures.

Field Name	Required Field	Critical Field
Transaction ID = 430 (matched trades)	Y	Y
Buy Clearing Member Number	Y	Y
Buy Clearing Member Account Type C = Customer Account F = Firm Account M = Market Maker Account	Y	Y
Buy Floor Trader ID	N	N
Buy CMTA Firm	N	N
Buy Open/Close Indicator	N	N
Buy Executing Broker	Y	Y
Buy Optional Data	N	N
Sell Clearing Member Number	Y	Y
Sell Clearing Member Account Type C = Customer Account F = Firm Account M = Market Maker Account	Y	Y
Sell Floor Trader ID	N	N
Sell CMTA Firm	N	N

Field Name	Required Field	Critical Field
Sell Open/Close Indicator	N	N
Sell Executing Broker	Y	Y
Sell Optional Data	N	N
Contract Quantity	Y	Y
Trading Symbol (6 character limit)	Y	Y
Expiration Month	Y	Y
Expiration Year	Y	Y
Trade Price Dollar Amount	Y	Y
Trade Price Decimal Amount	Y	Y
Execution Time	Y	N
As Of (Trade) Date	Y	Y
Buy Account Number	Y	N
Exchange for Physical Indicator	Y, if EFP, N, if not EFP	N
Block Trade Indicator	Y, if Block Trade N, if not Block Trade	N
Sell Account Number	Y	N

7.17.2.1 Account Number

The account number is a ten-character alphanumeric field designating the firm account number for which the transaction was executed.

8 Manual Process Workarounds

8.1 Settlement Price Input

If the automated process generates settlement prices unacceptable to ONE, the Help Desk will manually override settlement prices into CBOEdirect at the end of the trading day.

8.2 Block Trade and EFP Input

The Help Desk will enter block trades and EFPs and will coordinate between the trade parties to ensure acceptance of the trades.

8.3 Adjustments for Corporate Actions

CBOE*direct* will adjust Orders in response to corporate actions, when the adjustment is consistent with existing option Order adjustments. In certain events, CBOE*direct* will cancel any Good-'til-Canceled Orders and users will be able to reenter Orders with the correct price.

9 Reporting Requirements

In addition to the reports to be provided by CBOE*direct* as described elsewhere herein, the following reports will be generated by CBOE in the formats generated by CBOE Back Office systems with appropriate modifications for SFs.

Report Number	Report Name	Recipient
AS0260D	Daily Date Record Update	Accounting
AS0280D	Daily Trade History Audit Report	Accounting
AS0281M	Monthly Billing Audit Report	Accounting
AS0285M	F Origin Charged Customer Rates	Accounting
RS0201M	Monthly Volume Totals	Accounting
FL1400A	Weekly Open Interest by Series	Department of Market Regulation
AS0110A	MARKET DATA RETRIEVAL BY TIME/BRKR	Department of Market Regulation
AS0110C	MARKET DATA RETRIEVAL BY PRICE	Department of Market Regulation
CMRKSUM	CLOSING POSITION SUMMARY REPORT	Department of Market Regulation
MS2770	MDR MATCHED TRADE COMPARISON BY TIME	Department of Market Regulation
MS8872B	DAILY POSITION ACTIVITY REPORT	Department of Market Regulation
TP0207B	MATCHED TRANSACTION LISTING	Department of Market Regulation

10 Service Levels

10.1 Speed

The time required by the Match Engine to process orders will average 0.5 seconds or less "wall to wall," with a standard deviation of not more than 0.2 seconds, and the time required by the Match Engine to process quotes will average 0.5 seconds or less "wall to wall," with a standard deviation of not more than 0.2 seconds. "Wall to wall" with respect to an order or quote means from the point in time that the order or quote, as applicable, enters the front end processor (the first processor after the CBOE firewall processor), through processing, to the point in time when a trade report or other acknowledgement with respect to the order or quote exits the last processor before the CBOE firewall processor.

CBOE will calculate the average speed and the standard deviation for purposes of this SLA on a weekly basis (midnight on Sunday to midnight on the following Sunday). These requirements will be measured separately for quotes and orders. Any week in which either quotes or orders fail to satisfy the speed requirement will constitute a failure to meet this SLA. Any period of time during which the system is down (*i.e.*, during which the Match Engine is unable to process orders) will not be included in the calculations.

10.2 Reliability

The Match Engine must be able to process orders during 99.9% of the trading period, measured on a weekly basis. Any week in which reliability is less than 99.9% will constitute a failure to satisfy this SLA.

10.3 Reporting Requirement

CBOE must calculate performance against these requirements on a weekly basis and track violations of the requirements. When CBOE fails to perform to these standards, a report must be provided to the ONE as soon as possible.

11 [Reserved]

12 Appendix

12.1 Table of Configurations

The following table lists the configurable items. Actual values must be identified for each of these variables. Actual values listed in this table are based on the working assumptions.

Variable	Definition	Actual Value
Quote Response Time	The number of seconds allowed within which a Market Maker must provide a RFQ response to receive credit toward the RFQ response requirement.	30
Exchange Defined Width	The number of ticks between the bid and ask that meets the CBOE bid/ask spread requirement.	TBD
Minimum Quote Size	The number of contracts that a Market Maker must quote to receive credit toward the RFQ response requirement.	TBD
Continuous Market Time	The number of seconds during which a Market Maker must provide a quote in response to an RFQ in order to receive credit toward the RFQ response requirement.	30
Pre-opening Period	The number of minutes before the opening during which users may enter quotes and orders but no system processing occurs.	45
Opening Rotation	The number of seconds after the end of pre-opening I during which the system randomly sets the opening rotation.	25-35
EOP Display Time	The number of seconds after the start of the pre-opening after which the expected opening price is first calculated and displayed.	15
EOP Display Update	The interval, in seconds, by which the EOP is re-calculated and displayed.	2-3
Minimum Block Trade Size	The minimum quantity eligible to be executed outside CBOEdirect and reported as a Block Trade.	200
Dynamic Book Depth Display	The number of price levels deep updated dynamically in the book depth display.	5
Mandated Bust Request Time Limit	The number of minutes after an transaction made in error by which the error must be reported to the Help Desk for it to be eligible for mandated trade bust.	8
Reasonable Price Level Time Preceding	The number of minutes immediately preceding the placement of the order that generated the error trade.	10
Reasonable Price Level Time After	The number of minutes interval beginning n (30) seconds subsequent to the alleged erroneous execution.	5
Interval Start Time	The number of seconds after the alleged erroneous execution that begins the “Reasonable Price Level Time After”	30
Transaction Fees	The Transaction Fees assigned to each origin for execution of SFs.	Origin C =TBD Origin F = TBD Origin B = TBD Origin M = TBD Origin X = TBD