CBOE®

CHICAGO BOARD OPTIONS EXCHANGE

CBOE Application Programming Interface

CBOE FIX 4.2 Version 3.2b - Release Notes

Provides an overview of the updates and changes to the FIX 4.2 with this version release.

CBOE PROPRIETARY INFORMATION

06 January 2006

Document #[FIX-00]

Front Matter

Disclaimer

Support and Questions Regarding This Document

Questions regarding this document can be directed to The Chicago Board Options Exchange at 312.786.7300 or via e-mail: api@cboe.com.

The latest version of this document can be found at the CBOE web site http://systems.cboe.com.

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Overview

The material presented in this document highlight the upcoming changes for the new release of the FIX 4.2 API, Version 3.2b. Highlights and documentation changes are detailed in the sections below. Your feedback or questions regarding this document should be sent to API@cboe.com.

FIX 4.2, V3.2b Highlights

Simple Auction Liaison (SAL)

The auction type SAL is introduced in this release. SAL is a mechanism that provides a price-improvement auction for simple (non-complex) orders. AuctionType[9383] includes the value SAL=5. In addition, a new QuoteEntryRejectReason[368], SAL_IN_PROGRESS = 89, has been added.

SAL Details

1. When CBOE is at the NBBO, an eligible marketable order will be stopped at the NBBO and exposed to a brief electronic auction for price improvement. The origins, order size and classes eligible for auction will be configurable.

2. Once the auction begins, quoters who were initially on the NBBO and those that subsequently join or improve the market will not be able to fade or reduce size until the process completes (similar to Quote Trigger).

3. The starting price for the auction will be one penny better than the NBBO.

4. The auction message will be available to all market makers quoting the class (and firms that have orders resting at the top of the market).

5. At the end of the auction period, the order will be executed at the best prices. At each execution price, those that were on the NBBO at the start of the auction will have priority, up to their original size, over those who were not at the NBBO. NBBO participants may also join on quantity in excess of their original size along with all other respondents using the CUMA allocation.

6. DPMs, eDPMs and/or Preferred DPMs will retain a participation right if they were initially on the NBBO and are on the final auction price.

7. An auction will not begin (i.e. the incoming order will simply auto-ex) if the displayed size includes quotes and resting book orders, and if the order size exceeds the quote size.

8. The auction will end early and trade against the existing auction responses and quotes for the following reasons:

    a. An incoming quote locks or crosses the displayed market.

    b. An opposite side order is received that is tradable against the SAL order with a quantity equal to or greater than that of the SAL order. If the new order is smaller than the SAL order, it will trade against the SAL order and the auction will continue for the remainder of the SAL order.

  c. A new marketable order is received on the same side as the SAL order. This order will trade against any remaining responses to the original auction (after the original SAL order is filled), and then a new auction will start for the new order, if appropriate.

CFE Options on Futures (COF)

CFE Options on Futures (COF_MAIN) is a new trading session that allows users to trade options on futures on the CBOE Futures Exchange (CFE). Options on futures is Screen Based Trading only and does not include Hybrid functions. The session will be set to pre-open at 7:58a.m., open at 8:30a.m. and close at 3:02p.m.

COF Details

- Current CFE users who have access to CBOE*direct* will continue to use the same login and password. The CBOE help desk will set user enablements to allow trading in the COF_MAIN session.

- Supported order contingency types include: Market Order, Limit Order, AON, FOK, IOC, Stop and Stop Limit.

- Market makers entering quotes for options on futures will use the existing Quote Message (*MsgType[35]* = S) and for mass quotes the existing Mass Quote message (*MsgType[35]* = i) Users will need to specific the option fields. Required fields include:

Tag	Field Name	Comments
	Standard Header	*MsgType[35]* = S
117	QuoteID	Users should provide a quote identifier in this field on each quote sent to CBOEdirect. QuoteIDs do not have to be unique. You have the choice to keep the same QuoteID across multiple submissions of quotes for a specific product.
336	TradingSessionID	Trading Session that the product is in for which the quote is being entered W_MAIN, ONE_MAIN, CFE_MAIN, COF_MAIN, W_STOCK
55	Symbol	Symbol of the product for which the quote is being entered
167	SecurityType	OPT, FUT, MLEG
200	MaturityMonthYear	MaturityMonthYear of the product for which the quote is being entered
201	PutOrCall	PutOrCall of the product for which the quote is being entered
202	StrikePrice	StrikePrice of the product for which the quote is being entered
132	BidPx	Bid Price of the quote (Same Price of quote for MLEG products)
133	OfferPx	Offer Price of the quote (Opposite Price of quote for MLEG products)
134	BidSize	Bid Quantity of the quote (Same Quantity of quote for MLEG products)
135	OfferSize	Offer Quantity of the quote (Opposite Price of quote for MLEG products)
60	TransactTime	Time that the Quote Message is sent

- For regular and strategy order entry, market makers will use the exiting New Order-Single Message (*MsgType[35]* = D. CFE eligible Trading Privilege Holders and Authorized

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Traders that are not market makers may enter only orders, not quotes, into CBOE*direc*t. Users will need to specific the option fields. Required fields include:

Tag	Field Name	FIX 4.2 usage
	Standard Header	*MsgType[35]* = D
11	ClOrdID	Unique identifier of the order as assigned by institution. ClOrdID must be unique for each ExecBroker[76] (executing, give up, or clearing firm) + ClientID[109] (if a ClientID[109] is used at all).
		Branch + Branch Sequence Number + "hyphen" + Order Date
		***AAA9999-YYYYMMDD** (Don't forget the hyphen)*
		Branch is used by the Originator to identify the Branch. Required for all roles. For W_MAIN orders, this must be a 3-character alpha only field that must be all uppercase. Orders in purely electronic sessions that do not interact with the trading floor may use between 1-3 alpha only, all uppercase characters. If the user sends a non-W_MAIN order with 1 or 2 characters for the Branch field, there must be no spaces between the Branch and the Branch Sequence Number.
		Branch Sequence Number is a 1 to 4 numeric only value with no embedded blanks in the range: *1 – 9999*
		Order Date is separated from the Branch + Branch Sequence Number by a hyphen"-" and must be provided as follows:
		YYYYMMDD
76	ExecBroker	**Options and Futures**: Executing Firm: Valid CBOE clearing firm number for representation of this order when traded and submitted to CBOE Trade Match (CTM).
		This is a required field that must contain the *FirmIdentifier(123)* or *ExchangeIdentifier:FirmIdentifier (CME:123)* if the exchange is not CBOE.
		Linkage: 'P' Linkage order must have a valid clearing firm number known at the receiving NBBO exchange. This must also be a valid CBOE firm number for outbound validation.
1	Account	**Options and Futures**: Account field is required for market-maker order entry but optional for broker-dealer order entry. Accounts must be approved by the CBOE Membership Department and must be pre-configured by your API testing representative. Exact size is 3 and data type is alpha only. When market-makers enter orders of origin "M", "I", or "N" tag 9324 should be used in addition to tag 1 (see 9324 requirements). For entering orders of any origin other than "M", "I" or "N", (including "C" = customer), the Account field can contain any value.
		Linkage: For entering a Principal (P) Linkage order to an away market, this field must contain the market-maker's clearing account. This is normally the Q-Account or market-maker acronym.
21	HandlInst	Must be specified per specification.
		For entering a Principal (P) Linkage order:
		2 - indicates automatic execution (refer to the Linkage Plan)

Tag	Field Name	FIX 4.2 usage
55	Symbol	Trading Symbol. Examples: **CBOE Options** MSQ, DLQ, IBM, etc. this would be the reporting class symbol (e.g. DLQ, DLY, DLJ, DLZ, etc) **OneChicago Stock Futures** MSFT1C, IBM1C, etc.
167	SecurityType	Required 'OPT' for options, CS, FUT, INDX, MLEG, USTB
200	MaturityMonthYear	Format: YYYYMM (e.g., 200209)
201	PutOrCall	Required for Option products. 0 = Put, 1 = Call
202	StrikePrice	Required for Option products
54	Side	For Options or Futures orders, CBOE supports the following values: 1 = Buy 2 = Sell For orders of type MLEG (strategies), CBOE supports the following values: 1 = Same *or* B = Same 2 = Opposite *or* C=Opposite
38	OrderQty	Quantity specified on the original request message from the firm.
40	OrdType	**Options and Futures**: 1 = Market 2 = Limit 3 = Stop 4 = Stop Limit 5 = Market on close 7 = Limit or Better B = Limit on Close J = Market if Touched[1] Refer to Contingency Mapping Table for information on which order types are supported in which CBOE markets. **Linkage**: 2 = Limit Required for entering a Principal (P) Linkage order to an away market. This field must be specified as '2', a limit order.
44	Price	**All orders**: Price per contract – should be specified for all limit orders; Price should not be specified on market orders. Refer to Contingency Mapping Table. **Linkage**: Required for entering a Principal (P) Linkage order to an away market. The price field must be specified at the NBBO price of the destination exchange. **Cabinet**: Required for entering a Cabinet order. 0.01=Cabinet

Tag	Field Name	FIX 4.2 usage
59	TimeInForce	**Options and Futures**: Specifies how long the order remains in effect. Absence of this tag is interpreted as DAY. Valid values (Refer to Contingency Mapping Table): 0 = Day 1 = GTC 2 = OPG (at the open) 3 = IOC (Immediate or CXL) 4 = FOK (Fill or Kill) **Linkage**: '3' = IOC. Required for entering a Principal (P) Linkage order to an away market. This field must be specified as '3' = IOC.
60	TransactTime	Time order is submitted in UTC time
204	CustomerOrFirm	Order capacity (origin) (see also Rule80A[47]). See the section entitled *"Specify the order capacity (origin) on an order"* Do not use this tag for entering a Principal (P) Linkage order; use Rule80A instead.
386	NoTradingSessions	Used to specify the number of trading sessions – at this time 1 and only 1 trading session must be specified for each order.
336	TradingSessionID	**Options and Futures**: No more than one TradingSessionID must be specified on each order: CBOE trading floor: 'W_MAIN' CBOE Futures Exchange: 'CFE_MAIN' CFE Options on Futures: 'COF_MAIN' OneChicago: 'ONE_MAIN' Stock Trading On CBOEdirect: 'W_STOCK' **Linkage**: For Principal (P) linkage orders sent through CBOE for routing to an away market: TradingSessionID = 'W_MAIN'. Note: To specify the destination market for the linkage order, use the tag ExDestination (100) = [destination exchange code].
439	ClearingFirm	CMTA - This is an optional field designating a clearing firm that is different from the executing firm, as entered in ExecBroker (76). The value entered in ClearingFirm(439) is the clearing firm number where this trade will clear at the OCC.
440	ClearingAccount	**Options and Futures**: Required for all futures orders (ONE and CFE). Should not be used for option orders of origin "M", "N", or "I". Optional for non-M, non-N, and non-I options orders. Must specify the market-maker account where the trade will clear at the OCC. This field could be the Q-account, joint account, or the market-maker acronym of the market-maker. This tag should not be used for orders of origin "M" or "N" – instead, tag 9324 should be used. Market-makers entering orders of origin "M", "I", or "N" should use tag 9324 instead of tag 440 (see 9324 requirements). **Linkage**: NOT used for Linkage.

Tag	Field Name	FIX 4.2 usage
9324	ClearingOptionalData	**Options:** For **Customer** orders, the first four characters of this field get reported to the last four characters of the CBOE Trade Match Optional Data field. These four characters get reported to the OCC. This tag is **<u>required</u>** for all options orders of origin **"M"** or **"N"** that are sent to the CBOE. This tag is not required for options orders of origin "I". Contains data that will be passed on to CBOE trade match (CTM) and will be part of clearing information sent to the OCC. The data is specific to each member firm. For market maker orders routed to the CBOE Trading Floor (W_MAIN session), the tag 9324 should contain the Market Maker Account (Q Account, joint account, or market maker acronym). **<u>Market Maker format</u>:** `M:ABC ABC123`*`ABC`* **M:** in characters 1 and 2 (including the colon) **ABC** in characters 3 – 5. This value should contain the market maker account, Q-account, or joint account where the trade will clear. This value will be moved to the Market Maker Account field on the Trade Match record. **(Space)** in character 6 **ABC123** in characters 7 – 12 This is the firm's back office sub-account field. Not a required field. If present, it will be moved to characters 6–11 of the Trade Match Optional Data field. (Same as a Market Maker Terminal trade) **ABC** in characters 13-15 For orders of origin "I", "M", and "N", these three characters should contain the three-letter market-maker acronym. **<u>Preferred DPM</u>** Firms that wish to give one DPM priority in participating in a trade use this tag. The firm would send "P:firm;" and can coexist with other data that may be present in this tag. "firm" is the CBOE firm acronym that will be supplied by CBOE. Please note that the message must include the colon : and semi-colon ; **Futures**: This field stays with the order for the life of the order. The first 16 bytes go to the OCC. **Linkage**: This tag is **<u>not</u>** used for Linkage.

Tag	Field Name	FIX 4.2 usage

9465	OrderOrigin	**Options and Futures**: If a Broker_Dealer enters an order on behalf of a market-maker in the W_MAIN, CFE_MAIN, COF_MAIN or ONE_MAIN sessions, the market-maker's acronym must be entered in this tag. The default exchange is CBOE, but an exchange may be specified. This is also called "Originator".
		
		`CBOE:ABC`
		
		-or you may enter-
		
		`ABC`
		
		Linkage: Required for entering a Principal (P) Linkage order to an away market. This field must specify the valid CBOE market maker's acronym (trading badge) of the entering market maker.

New Functionality for CBOEdirect FIX Servers

OrderStatus Suppression

Users can request the suppression of certain types of Execution Reports at source, through the use of the UDF [Tag 9191 - SuppressOrderStatus] in the logon message. This tag can have multiple comma-separated values. The valid values for this are the same as that of [Tag 39].

Example: If the user does not desire to receive "Nothing Done" at the end of the day, they could send in a request to suppress Execution Reports of Type 39=3 at logon. Users can request to receive product status messages [35=f] via the product definition message [35=d], as discussed in detail later in this document. Users can request this through [Tag 57] in the logon message.

Some examples of logon messages, ***old and new – all valid***, to incorporate the above changes:

Old:

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD^ 98=0^ 108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH^ 98=0^ 108=30^ 10=021^
```

New:

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:COMPPRODSUB^ 98=0^ 108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH:COMPPRODSUB^ 98=0^
108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:COMPPRODSUB^ 98=0^ 108=30^ 9191=3^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH:COMPPRODSUB^ 98=0^
108=30^ 9191=3,0^ 10=021^
```

...and combinations thereof.

Optional Mass Security Status Message via FIX

Existing messaging

Security Status messages (Tag 35=f) in Fix are currently distributed by product. Firms subscribe by class using the Security Status Request (Tag 35=e), requesting either a snapshot (Tag 263=0), a subscription (Tag 263=1) or an unsubscribe to a previous subscription (Tag 263=1).

At the open, CBOE sends thousands of product status messages at a high rate, which has proven to be an impact on the available CPU of CBOE and customer FIX servers, as well as customer bandwidth. With a view towards streamlining this data stream, CBOE has implemented an *alternate* method of disseminating product status using existing standard FIX messaging. CBOE will continue support of the current product status model as the default and will use the new method only upon request.

Compact Product Status

To enable this feature at login, the firm adds a keyword in Tag 57 (the string '**COMPPRODSUB')** to indicate it wants to handle *SecurityStatus* messages in the compact mass message format.

A current login message in production looks like:

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD^ 98=0^ 108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH^ 98=0^ 108=30^ 10=021^
```

To subscribe for the new format for product status, the user will send in either of the following login messages:

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:COMPPRODSUB^ 98=0^ 108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH:COMPPRODSUB^ 98=0^
108=30^ 10=021^
```

Note: Users can choose either format of the login message for respective SecurityStatus messages.

SecurityStatusRequest:

The *SecurityStatusRequest* will stay unchanged.

SecurityStatus (encapsulated in SecurityDefinition)

Under the new format, the *SecurityDefinition* message (with its repeating group) will be used to send out Security Status messages. For this purpose, the following tags will be used to indicate such usage:

SecurityResponseType [323]: New values of 7 & 8

A value of '7' will indicate a response to a 'snapshot' product status request. A value of '8' will indicate a response to a 'snapshot + update' request.

The product information for each product will be contained in the repeating group in the SecurityDescription message. The standard fix tags in the repeating group (example – *UnderlyingSymbol, UnderlyingSecurityID, UnderlyingSecurityType* etc) will contain information for each product. There will be one departure to indicate the product status –

UnderlyingSecurityDesc [307]

This tag will contain the product status of the related product.

SecurityDefinition Message Fragmentation

The SecurityDefinition message is designed to be able to transmit the response to a request across multiple messages. CBOEdirect will break up requests providing only 100 securities per message.

The *TotNumSecurities [393]* field will contain the total number of securities that will be provided in the response across all messages. The *NoRelatedSym [146]* field will contain the number of securities provided within a message.

Mapping Table for SecurityStatus to SecurityDefinition

The table below maps the old tags (i.e. as in the SecurityStatus message) to their new counterparts (i.e. in the SecurityDefinition message) in the repeating group:

Old Tag	New Tag
55 (Symbol)	311
48 (SecurityID)	309
22 (IDSource)	305
167 (SecurityType)	310
200 (MaturityMonthYear)	313
205 (MaturityDay)	314
201 (PutOrCall)	315
202 (StrikePrice)	316
207 (SecurityExchange)	308
326 (SecurityTradingStatus)	307

Further, information encapsulated in *UnsolicitedIndicator [325]* indicating whether this is a subscription or a snapshot is presented via *SecurityResponseType [323]* as indicated above.

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<u>Example for SecurityStatus in a SecurityDefinition message</u>

Response to a security status request, indicating that the request was a snapshot (323=7), where the total number of security status products is 103 (393=103), a 100 having been previously sent, the remaining 3 (146=3) contained in this request. Tag 322=1 indicates that this is the second message of the set (a previous one with 322=0 having been sent, containing the first 100 products). Finally, Tag 307=22 indicates that two of the three products here are in Opening Rotation, while Tag 307=17 shows that one product is open.

```
8=FIX.4.2^ 9=0654^ 35=d^ 34=83^ 49=PFIX203^ 56=SOX^ 52=20051003-
12:07:36^ 320=FxMg006_0008^ 322=1^ 323=7^ 336=W_MAIN^ 393=103^ 146=3^
311=OAD^ 309=157286498^ 305=8^ 310=OPT^ 313=200701^ 314=20^ 315=1^
316=30^ 308=W^ 307=22^ 311=CBQ^ 309=111018588^ 305=8^ 310=OPT^
313=200601^ 314=21^ 315=1^ 316=35^ 308=W^ 307=22^ 311=CBQ^
309=214567303^ 305=8^ 310=OPT^ 313=200511^ 314=19^ 315=0^ 316=45^ 308=W^
307=17^ 10=232
```

Document Changes

FIX-01

- No changes

FIX-03a

- Updated the Logon Message (*MsgType=A*) to include UDF SuppressOrderStatus[9191] for order status suppression. Users can request the suppression of certain types of Execution Reports through the use of this tag. This tag can have multiple comma-separated values. Valid values are the same as OrdStatus[39].

    Status of the order.

    Options and Futures:

    0 = New
    1 = Partially filled
    2 = Filled
    3 = Done for day
    4 = Canceled
    6 = Pending Cancel/Replace
    A = Pending New

    Linkage:

    0 = New
    1 = Partially filled
    2 = Filled
    4 = Canceled
    8 = Rejected

- Added "Example 4 Request the suppression of Execution Reports at Logon":

    Example: A user that wants to block out receiving "Nothing Done" at the end of the day, could send in a request to suppress Execution Reports at logon using UDF SuppressOrderStatus[9191].

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CBOE Proprietary Information

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:COMPPRODSUB^ 98=0^ 108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH:COMPPRODSUB^ 98=0^
108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:COMPPRODSUB^ 98=0^ 108=30^ 9191=3^
10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH:COMPPRODSUB^ 98=0^
108=30^ 9191=3,0^ 10=021^
```

- Added COMPPRODSUB to TargetSubID[57]

  For Logon (*MsgType*=**A**):

  Used to specify the type of environment either

  "TEST", "PROD"

  If you require order status to be published immediately following successful logon you must append:

  ":WITHORDERPUBLISH"

  after the *Environment.* The default behavior for Version 2.0 is to NOT publish order status upon logon.

  If you would like to handle SecurityStatus messages in the compact mass message format, you must append:

  ":COMPPRODSUB" after the *Environment*.

- Added "Example 3 Logon requesting Product Status messages in the Compact Mass Message Format":

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:COMPPRODSUB^ 98=0^ 108=30^ 10=021^
```

Or

```
8=FIX.4.2^ 9=0084^ 35=A^ 34=1^ 49=ZZCBOE4^ 56=PFIX203^ 52=20020923-
15:53:16^ 50=SOX:SOX^ 57=PROD:WITHORDERPUBLISH:COMPPRODSUB^ 98=0^
108=30^ 10=021^
```

Note: Users can choose either format of the login message for respective SecurityStatus messages.

FIX-03b (Including Tag Dictionary)

- Added the table below to request Security Status messages in compact mass message format using the Security Definition message.

Table 1 Security Definition message used to send Security Status messages in the compact mass message format

Tag	Field Name	FIX Req'd	CBOE Req'd	Comments
	Standard Header	Y	Y	*MsgType* = d (lowercase)
320	SecurityReqID	Y	Y	This will contain the SecurityReqID[320] that was provided on the Security Definition Request corresponding to this Security Definition message.
322	SecurityResponseID	Y	Y	Identifier for the Security Definition message which is generated by the CBOEdirect FIX adapter. This contains a unique identifier for each Security Definition message returned in response to a Security Definition Request. This is provided because it is possible to receive multiple Security Definition messages for a single Security Definition Request. For example, requesting a list of products (option series) for an option class will result in 100 products being returned per Security Definition message.
323	SecurityResponseType	N	N	1 - Accepted the security definition request for a specific security or strategy as defined in the request. 2 - Accepted the security definition request for a specific product or strategy with revisions, such as returning a strategy product with an opposite definition in terms of buy and sell sides per leg. 3 - Response contains a list of security types traded on the CBOEdirect system. 4 - Response contains a list of products. 5 - Request was rejected. 6 - The product specified in the request was not found (No match) 7 - Response to a 'snapshot' product status request 8 - Response to a 'snapshot + update' product status request
393	TotNumSecurities	N	N	Total Number of Securities being returned across all Security Definition messages sent as a response to the Security Definition Request identified by *SecurityReqID[320]*
146	NoRelatedSym	N	N	Number of securities returned as part of the definition.
	Begin Repeating Group for NoRelatedSym			
311	→UnderlyingSymbol	N	N	The Symbol must be specified as the first field in the repeating group. Required if *NoRelatedSym* >0
309	→UnderlyingSecurityID	N	N	CBOEdirect product key for the product
305	→UnderlyingIDSource	N	N	"8"
310	→UnderlyingSecurityType	N	N	OPT, CS, FUT, INDX, MLEG, USTB
313	→UnderlyingMaturityMonthYear	N	N	Expiration Year and Month (Proper format: 200204)

Tag	Field Name	FIX Req'd	CBOE Req'd	Comments
314	→UnderlyingMaturityDay	N	N	Will contain the Maturity expiration day of the month for derivative products.
315	→UnderlyingPutOrCall	N	N	Used for options only. 0 = Put, 1 = Call
316	→UnderlyingStrikePrice	N	N	Used for options only. Valid values: 0 - 99999999.9999
308	→UnderlyingSecurityExchange	N	N	W = CBOE; 50 = OneChicago
307	→UnderlyingSecurityDesc	N	N	Identifies the trading status applicable to the product. 2 = Halted 17 = Open 18 = Closed 21 = Pre-Open 22 = Opening Rotation 23 = Fast 24 = ON_HOLD 25 = OFF_HOLD 26 = Temporarily_Not_Available
54	→Side	N	N	Indicates if this leg of a strategy product is to be Bought or Sold. Only specified if SecurityType[167]="MLEG"
	End Repeating Group			
	Standard Trailer	Y	Y	

- NoContraBrokers[382] – deleted the sentence "A maximum of 8 contraparties can be reported by FIX4.2".

- Added UDF SuppressOrderStatus[9191] to the Tag Dictionary

- Add the values below to SecurityTradingStatus[326].

  24 = ON_HOLD
  25 = OFF_HOLD
  26 = Temporarily_Not_Available

FIX-03c

- Updated StockFirmName[9380] to read:

  Buy_writes: used to specify where the equity leg of the buy_write strategy is to be executed. This field is recommended for buy_writes, but not required. This tag is usually accompanied with the use of tag 9381, and the combination is often referred to "Meets and Exchange".

- Updated StockFirmName[9381] to read:

  A text field that is used to specify the contact at the specified Exchange that will facilitate the trading of the equity portion of the buy_write. This tag is usually accompanied with the use of tag 9380, and the combination is often referred to "Meets and Exchange".

- Updated SecurityID[48] in the New Strategy Order—Single Message to read:

  "This field, also known as the CBOEdirect product key, is *required* for strategy (multi-leg) products, except for strategies with the "one-step" method."

- Included a section for SAL details.

- Updated Table 2 Order Contingency Types for each Trading Session to include COF_MAIN.

- Added the following description to ExecID[17]:

"In the case of Multi-leg (spread) orders, each leg will receive its own unique ExecID. That will be constructed by appending a space and the Trading System Time (expressed in milliseconds) of the construction of that leg's Execution Report Message to the ExecID of the overall order's ExecID. The Trading System Time is held internally as a 64-bit integer. The other individual parts of the ExecID are held internally as 32-bit integers."

FIX-03d

- Updated AuctionType[9383] to include AuctionType_SAL=5. SAL stands for Simple Auction Liaison.

- Added a new QuoteEntryRejectReason[368], SAL_IN_PROGRESS = 89.

- Changed the description of ProfessionalSize[9005] to read:

9005	*ProfessionalSize*	This indicates the quantity of the bid or offer that is of professional origin. This size + CustomerSize = total bid or offer size. Only applies to the W_MAIN session. This tag will not appear for messages in the CFE_MAIN or ONE_MAIN sessions.

- The Hybrid Quote Trigger section for scenario 2 below reads:

The market-maker submits a Mass Quote or Quote message during a quote trigger. *When this happens, the quote message is rejected, but upon the trigger completing, the server will cancel the marketmaker's quote with a cancel quote reason stated in the QuoteText tag (9008) as "SYSTEM". Quotes rejected as a result of the quote being in trigger will have the tag 300 reject code = QUOTE_TRIGGER=94. This prevents a market-maker from modifying his or her quote during the trigger. This also prevents the market-maker from having a stale quote left in the marketplace after a quote trigger has completed.*

Because the QUOTE_TRIGGER=94 reject code is not currently used, the section was changed to read:

The market-maker submits a Mass Quote or Quote message during a quote trigger. *When this happens, the quote message is rejected, but upon the trigger completing, the server will cancel the market-maker's quote with a cancel quote reason stated in the QuoteText tag (9008) as "SYSTEM". Quotes rejected as a result of the quote being in trigger will have the tag 300 reject code = QUOTES_IN_PROGRESS=97. This prevents a market-maker from modifying his or her quote during the trigger. This also prevents the market-maker from having a stale quote left in the marketplace after a quote trigger has completed.*

FIX-06

- No changes

FIX-07

- No changes

Test Plan Changes

FIX Phase 2 Test Plans

* No changes

3a, Security Definition Test Plan

* Added section testing strategy product state updates.

3b, Market Data Test Plan

* Added a section for strategy product current market.

* Added a test plan for verifying that Market Data subscriptions use separate callbacks.

3c, Quote Test Plan - Hybrid-ONE-CFE (includes 3j, Hybrid Sections and 3L, CFE Supplemental Tests)

* Added section for testing using test classes.

* Changed the expected results for the quote trigger test cases.

3e, W_MAIN-ONE-CFE Order Test Plan (includes 3k, CFE Supplemental Tests)

* Added comment recommending subscription to product states.

* Added section for testing using test classes.

* Added order throttling section

* Added section for SPX orders during VIX settlement.

3f, Clearing Firm, Duplicate Message Test Plan

* No changes

3g, Strategy Quote Test Plan - ONE-CFE

* Added comment recommending subscription to product states.

* Added a recommendation for subscribing to strategy market data.

3i, W_MAIN-ONE-CFE Strategy Order Test Plan

* Added comment recommending subscription to product states.

* Added a test case for sending a market order.

* Added a recommendation for subscribing to strategy market data.

3m, Stock Trading On CBOEdirect (STOC) Order Test Plan

- No changes

3n, Stock Trading On CBOEdirect (STOC) Quote Test Plan

- No changes

3o, Stock Trading On CBOEdirect (STOC) DPM Administrative Test Plan

- No changes

Phase 4 Test Plan

- Added case that verifies all FIX connections, including CFIX Engines, can be reached.

- Added case that verifies that user can login to each and every production CAS.

- Added case that has user subscribe to market data for all classes that the user intends subscribe for in production.

- Added case that has CBOE verify that user's market data subscriptions all use separate callback objects.