

# Interface Specifications HKEX Orion Central Gateway - Securities Market (OCG-C)

# **FIX Trading Protocol**

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# 1. Document Control

# 1.1 Change History

| Version<br>Number | Issue Date       | Section Number   | Status          |
|-------------------|------------------|--|-----------------|
| 1.0               | 31 October 2012  | All  | First Version   |
| 1.1               | 21 December 2012 | <ul> <li>3.2 - Comp ID of HKEX</li> <li>3.6 - Password Policy</li> <li>5.7 - Transmission of missed messages</li> <li>7.7.6.4 - Order Cancelled - Unsolicited</li> <li>7.7.6.9 - Auto-matched Trade Cancelled</li> <li>7.7.7 - Cancel Reject</li> <li>7.9.1 - Trade Capture Report</li> <li>7.9.2 - Trade Capture - Confirmation/Acknowledgement</li> <li>7.10.2 - Party Entitlement Report</li> <li>8 - Data Dictionary</li> <li>Appendix A - Password Policy</li> </ul>  | Revised Version |
| 1.2               | 25 March 2013    | <ul> <li>3.4 – Encryption</li> <li>6.4 – Text Field</li> <li>6.5.3.3 – Trade Report ID</li> <li>6.5.8 – Amending an Order</li> <li>6.9 – Cancel on Disconnect</li> <li>7 – Message Definitions</li> <li>8 – Data Dictionary</li> </ul>   | Revised Version |
| 1.3               | 28 June 2013     | <ul> <li>3.6 - Change Password</li> <li>6.2 - Security Identification</li> <li>6.3 - Party Identification</li> <li>6.5.3.1 - Client Order ID</li> <li>6.5.3.2 - Quote Bid, Quote Offer ID and Quote Message ID</li> <li>6.5.3.3 - Trade Report ID</li> <li>6.5.8 - Amending an Order</li> <li>6.6.4 - Message Flow</li> <li>7.7.1 - New Order - Single (D)</li> <li>7.7.2 - Order Cancel Replace Request (G)</li> <li>7.7.5.2 - OBO Mass Cancel (q)</li> <li>7.7.6.8 - Trade (Order Executed)</li> <li>7.7.7 - Cancel Reject (9)</li> <li>7.8.2 - Quote Cancel (Z)</li> <li>7.9.2.3 - Trade Report Ack (AR)</li> <li>8.2 - Business Level</li> </ul> | Revised Version |
| 1.4               | 2 December 2013  | Clarification of message fields and message handling:  Section 3.4 - Encryption Section 6 - Service Description Section 7 - Message Format Section 8 - Data Dictionary   | Revised Version |



| Version<br>Number | Issue Date               | Section Number  | Status          |
|-------------------|--------------------------|---|-----------------|
| 1.5               | 20 June 2014             | Odd lot/Special Lot functions added:  6.8 – Odd lot/Special lot Order Handling 7.7.2 – New Odd lot/Special Lot Order 7.7.7.10 – Trade (Odd lot/Special lot Order Executed) 7.7.10.11 – Trade (Semi-auto-matched) Cancelled 7.9 – Trade Capture Report – Semi-automatic Submission, Confirmation/Ack, and Cancellation Data Dictionary |                 |
| 1.6               | 23 July 2015             | Update (description only) for AMS Volatility Control Mechanism (VCM):  7.7.7.4 – Order Cancelled – Unsolicited  8.2 – Business Level  | Revised Version |
| 2.0               | 12 January 2017          | Update for OTP-C  | Revised Version |
| 2.1               | 12 July 2017             | 7.7.7.4 Order Cancelled – Unsolicited  Keep same message format as for AMS (no RejectText(1328) field).   | Revised Version |
| 2.2               | 29 June 2018             | <ul> <li>6.5.3.4 Order ID</li> <li>Update description for OBO Cancel due to obsolescence of terminal &amp; OG devices.</li> <li>6.5.7.3 OBO Mass Order Cancellation</li> <li>Define the proper condition for the usage of OBO Mass Order Cancellation.</li> </ul>   | Revised Version |
| 3.0               | 28 December 2020         | <ul> <li>Update for CMG migration:</li> <li>Global terminology change of OCG to CMG</li> <li>Support RSA Padding scheme OAEP for password encryption in the Logon message</li> </ul>  | Revised Version |
| <u>3.1</u>        | <u>13 August 2021</u>    | Update messages to provide HK Investor  ID (BCAN Field)  New Order (Board lot or Odd  lot)  Quote  Manual Trade  Provide Aggressive/Passive Indicator for auto-matched trades  Increase the transaction time precision to microsecond   | Revised Version |
| <u>3.1</u>        | <u>23 September 2021</u> | • Change the name CMG to OCG-C  | Revised Version |



# 2. Introduction

This document describes the FIX interface protocol of the HKEX Orion Central Gateway - Securities Market ("OCG-C"), the market access platform for the Securities market.

The OCG-C provides a centralized, highly resilient, low latency, flexible and scalable platform for all Exchange Participants (EPs) to access HKEX securities trading system ("OTP-C") for order, quote and trade management.

The terminology used, message format, message flow and event models described throughout this document are as per FIX 5.0 SP2 protocol specifications with HKEX specific extension packs.

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# 3. Connectivity

#### 3.1 Session

Exchange Participants connect their broker supplied systems ("BSS" or "Client") to the OCG-C via subscription to one or more OCG-C "Session". This connection is a standard TCP/IP point-to-point connection.

EPs are expected to pre-register at least one IP address using which a client from their end would establish a Trading Session with the OCG-C. EPs can optionally pre-register up to 3 additional IP addresses for each Session, for backup purposes.

A session can be established from only one of the pre-registered IP addresses for that session. EPs can pre-register any given IP address for more than one session such that the same BSS can be used to connect to OCG-C through one or more sessions.

# 3.2 Comp ID

The client should use the Comp ID provided by HKEX for each session in order to connect to the OCG-C. A single client may have multiple connections to the OCG-C i.e., multiple FIX sessions, each with its own Comp ID.

The messages sent to the OCG-C should contain the Comp ID assigned to the client in the field Comp ID in the header section.

Comp ID of the OCG-C, as set for TargetCompID of the client initiated messages & SenderCompID of the OCG-C initiated messages is "HKEXCO".

#### 3.3 IP Address and Port Numbers

A FIX client is expected to hunt for a connection point (IP Address and Port Number) within a pool of connection points provided by HKEX for the following OCG-C service.

At the time of the first logon for the day, the client is expected to attempt to connect to the first connection point within the pool. If this first attempt is not succeeded or if the connection is accepted but abruptly dropped by the OCG-C without any message before the Logon message can be exchanged, then the client is expected to continue attempting the connection points in the pool one by one in sequence until a successful connection and a FIX session can be established. If a session could not be established having attempted all the connection points in the pool, the client is expected to cycle back to the first connection point then and retry.

During a reconnection within the same day the client can attempt to connect to the identified connection point (IP and Port) through the connection hunting process in order to re-establish the session, before moving to the other connection point.

HKEX will provide this pool of IP address and Port numbers through a separate medium.

# 3.4 Encryption

The OCG-C interface protocol expects password and new password be encrypted when they are sent in the Logon message from the client to the OCG-C.

To encrypt the password, the client is expected to use a 2048-bit RSA (<a href="http://en.wikipedia.org/wiki/RSA">http://en.wikipedia.org/wiki/RSA</a> (algorithm)) public key circulated (through a different medium) by HKEX. The binary output of the RSA encryption must be represented in Big Endian (Padding scheme is PKCS #1 or OAEP) and then converted to an alphanumeric value



by means of standard base-64 encoding (<a href="http://en.wikipedia.org/wiki/Base64">http://en.wikipedia.org/wiki/Base64</a>) when communicating with the OCG-C.

HKEX may periodically renew the public key used by the client and after a public key renewal; a client may continue to use the old key for a limited grace period. Both keys may be used during this time.

#### 3.5 Password

The client should specify their password in the EncryptedPassword (1402) field of the Logon (35=A) message. This password must be in encrypted form.

The status of the password (i.e. whether it is accepted or rejected) will be specified in the SessionStatus (1409) field of the Logon (35=A) sent by the OCG-C to confirm the establishment of a FIX connection.

Repeated failures in password validation may force HKEX to lock the client; the EP is expected to contact HKEX to unlock the client and reset the password.

# 3.6 Change Password

Each new Comp ID will be assigned a password on registration. The client is expected to change the password upon first logon whenever a password is (re)issued by HKEX.

Password change request can be made together with Logon (35=A) request. The client should specify the encrypted new password in the EncryptedNewPassword (1404) field and the current encrypted password in the EncryptedPassword (1402) field.

The new password must comply with HKEX password policy (refer to <u>Appendiex A</u>). The status of the new password (i.e. whether it is accepted or rejected) will be specified in the SessionStatus (1409) field of the Logon sent by the OCG-C to confirm the establishment of a FIX connection. The new password will, if accepted, be effective for subsequent logins.

The client is required to change the password periodically. HKEX will set expiry duration for the password without exemption; a reminder will be sent indicating that the password is to about to expire, through the Text (58) field in the Logon (35=A) response. Once the password has expired for a client, that client will not be allowed to logon, and the EP is required to contact HKEX to unlock and reset the client password.

#### 3.7 Failure and Recovery

The system has been designed with fault tolerance and disaster recovery technology that ensures that trading should continue in the unlikely event of a process or server outage.

If the client is unexpectedly disconnected, it should attempt to re-connect to the OCG-C before attempting to follow the connection mechanism described in **Section 3.3**.

# 4. Session Management

# 4.1 Establishing a FIX Session

Each client will use one of the IP address and port sets provided to establish a TCP/IP connection with the OCG-C. The client will initiate a FIX session at the start of each trading day by sending the Logon (35=A) message.

A client must identify itself by providing its Comp ID in SenderCompID (49) field. The OCG-C will validate this SenderCompID, password and IP address of the client.

Once the client is authenticated, the OCG-C will respond with a Logon (35=A) message with SessionStatus (1409) set to 0 = Session Active. If the client's Logon message included the field NewEncryptedPassword and the client is authenticated, the OCG-C will respond with a Logon message with SessionStatus (1409) set to 1 = Session Password Changed.

The client must wait for the Logon from the OCG-C before sending additional messages. If additional messages are received from the client before the exchange of Logon messages, the TCP/IP connection with the client will be disconnected.

If a logon attempt fails for the following reasons, the OCG-C will send a Logout (35=5) or a Reject (35=3) and then terminate the session:

- Password failure
- Comp ID is locked
- Logon is not permitted during this time

For all other reasons, including the following, the OCG-C will terminate the session without sending a Logout or Reject:

Invalid Comp ID or IP address

If during a logon of a client (i.e., a Comp ID), the OCG-C receives a second connection attempt while a valid FIX session is already underway for that same Comp ID, the OCG-C will terminate both connections without sending a Logout or Reject message.

Inbound message sequence number will not be incremented if the connection is abruptly terminated due to the logon failure.

If a session level failure occurs due to a message sent by the client which contains a sequence number that is less than what is expected and the PossDup (43) is not set to Y = Yes, then the OCG-C will send a Logout message and terminate the FIX connection. In this scenario the inbound sequence number will not be incremented.

If the OCG-C does not respond to the session initiation (client initiated Logon message), the client is expected to wait for a time period of *60 seconds* prior to terminating the connection. The client is expected to retry session initiation after an elapsed time period of *60 seconds*.

If a client is disconnected abruptly or via a Logout message (35=5) from the OCG-C, the client is expected to wait for a time period of **10** seconds prior to reconnecting to the OCG-C.

# 4.2 Message Sequence Numbers

As outlined in the FIX protocol, the client and OCG-C will each maintain a separate and independent set of incoming and outgoing message sequence numbers. Sequence numbers should be initialized to 1 (one) at the start of the day and be incremented throughout the session. Either side of a FIX session will track the:



- NextExpectedMsgSeqNum (789) (starting at 1)
- Next To Be Sent Message Sequence number (starting at 1); with respect to the contra-party.

Monitoring sequence numbers will enable parties to identify and react to missed messages and to gracefully synchronize applications when reconnecting during a FIX session.

Any message sent by either side of a FIX session will increment the sequence number unless explicitly specified for a given message type.

If any message sent by one side of a FIX session contains a sequence number that is LESS than the NextExpectedMsgSeqNum (789) then the other side of this session is expected to send a Logout message and terminate the FIX connection immediately, unless the PossDup flag is set to Y = Yes

A FIX session will not be continued to the next trading day. Both sides are expected to initialize (reset to 1) the sequence numbers at the start of each day. At the start of each trading day if the client starts with a sequence number greater than 1 then the OCG-C will terminate the session immediately without any further exchange of messages.

# 4.3 Heart Beat and Test Request

The client and the OCG-C will use the Heartbeat (35=0) message to monitor the communication line during periods of inactivity and to verify that the interfaces at each end are available.

The heartbeat interval as in HeartBtInt (108) is recommended to be set as 20 Seconds.

The OCG-C will send a Heartbeat anytime it has not transmitted a message for the heartbeat interval. The client is expected to employ the same logic.

If the OCG-C detects inactivity for a period longer than *3 heartbeat intervals*, it will send a Test Request message to force a Heartbeat from the client. If a response to the Test Request (35=1) is not received within a reasonable transmission time (recommended being an elapsed time equivalent to 3 heartbeat intervals), the OCG-C will send a Logout (35=5) and break the TCP/IP connection with the client. The client is expected to employ similar logic if inactivity is detected on the part of the OCG-C.

#### 4.4 Terminating a FIX Session

Session termination can be initiated by either the OCG-C or the client by sending a Logout message. Upon receiving the Logout request, the contra party will respond with a Logout message signifying a Logout reply. Upon receiving the Logout reply, the receiving party will terminate the connection.

If the contra-party does not reply with either a Resend Request or a Logout reply, the Logout initiator should wait for *60 seconds* prior to terminating the connection.

The client is expected to terminate each FIX connection at the end of each trading day before the OCG-C service is shut down. However, all open FIX connections will be terminated (a Logout message will be sent) by the OCG-C when its service is shut down. Under exceptional circumstances the OCG-C may initiate the termination of a connection during the trading day by sending the Logout message.

If, during the exchange of Logout messages, the client or the OCG-C detects a sequence gap, it should send a Resend Request.

# 4.5 Re-establishing a FIX Session



If a FIX connection is terminated during the trading day it may be re-established via an exchange of Logon messages.

Once the FIX session is re-established, the message sequence numbers will continue from the last message successfully transmitted prior to the termination.

#### 4.6 Sequence Reset

The sequence reset could be done in two modes;

#### 1. Gap-fill mode:

Gap-fill mode is expected to be used by one side when skipping session level messages which can be ignored by the other side.

#### 2. Reset mode:

Reset mode is used only in exceptional scenarios to indicate a reset in the session's starting sequence number. This mode can ONLY be used by the OCG-C. Client initiated resets would be rejected by the OCG-C.

Following scenarios exist:

# 4.6.1 During a Session

The OCG-C and the client may use the Sequence Reset (35=4) message in Gap Fill mode if either side wishes to increase the expected incoming sequence number of the other party.

The OCG-C may also use the Sequence Reset message in Sequence Reset mode if it wishes to increase the expected incoming sequence number of the other party. The Sequence Reset mode should only be used to recover from an emergency situation. It should not be relied upon as a regular practice.

# 4.6.2 When starting a new Session

#### 4.6.2.1 Reset Initiated by the Client

Reset sequence (reset to 1) through the Logon Message will not be facilitated by the OCG-C. In order to reset the sequence (reset to 1), the client should manually inform the HKEX Operations Desk.

#### 4.6.2.2 Reset Initiated by the OCG-C

The system has been designed with fault tolerance and disaster recovery technology that should ensure that the OCG-C retains its incoming and outgoing message sequence numbers for each client in the unlikely event of an outage. However, the client is required to support a manual request by HKEX to initialize sequence numbers prior to the next login attempt.

# **4.7** Fault Tolerance

After a failure on client side or on OCG-C side, the client is expected to be able to continue the same session.

In case of a catastrophic scenario, the OCG-C will restart from a higher sequence number considering the previous session or may start from sequence number 1.

If the sequence number is reset to 1 by the OCG-C, all previous messages will not be available for the client side.

The client and the OCG-C are expected to negotiate on the NextExpectedMsgSeqNum (789) and Next To Be Received Sequence number through an alternate medium prior to initiating the new session (Manually setting the sequence number for both ends after having a direct communication with the client).



# 4.8 Checksum Validation

The OCG-C performs a checksum validation on all incoming messages into the input services. Incoming messages that fail the checksum validation will be rejected and the connection will be dropped by the OCG-C without sending a logout.

Conversely, in case of a checksum validation failure, the client is expected to drop the connection and take any appropriate action before reconnecting.

Messages that fail the checksum validation should not be processed.

# 5. Recovery

# 5.1 General Message Recovery

- A gap is identified when an incoming message sequence number is found to be greater than NextExpectedMsgSeqNum (789).
- The Resend Request will indicate the BeginSeqNo (7) and EndSeqNo (16) of the message gap identified and when replying to a Resend Request, the messages are expected to be sent strictly honouring the sequence.
- If messages are received outside of the BeginSeqNo and EndSeqNo, then the recovering party is expected to queue those messages until the gap is recovered.
  - During the message recovery process, the recovering party will increment the *Next Expected Sequence* number accordingly based on the messages received. If messages applicable to the message gap are received out of sequence then the recovering party will drop these messages.
- The party requesting the Resend Request can specify "0" in the EndSeqNo to indicate that they expect the sender to send ALL messages starting from the BeginSeqNo.
  - In this scenario, if the recovering party receives messages with a sequence greater than the *BeginSeqNo*, out of sequence, the message will be ignored.
- Administrative messages such as Sequence Reset, Heartbeat and Test Request which can be considered irrelevant for a retransmission could be skipped using the Sequence Reset message in gap-fill mode.
  - Note that the OCG-C expects the client to skip Sequence Reset messages when replying to a Resend Request at all times.
- When resending messages, the OCG-C would use either PossDup or PossResend flag to indicate whether the messages were retransmitted earlier.
  - If PossDup flag is set to Y = Yes, it indicates that the same message with the given sequence number with the same business content may have been transmitted earlier.
  - In the case where PossResend flag is set to Y = Yes, it indicates that the same business content may have been transmitted previously but under the different message sequence number. In this case business contents needs to be processed to identify the resend. For example, in Execution Reports the ExecID (17) may be used for this purpose.

#### **5.2** Resend Request

The client may use the Resend Request message to recover any lost messages. This message may be used in one of three modes:

- (i) To request a single message. The BeginSeqNo and EndSeqNo should be the same.
- (ii) To request a specific range of messages. The BeginSeqNo should be the first message of the range and the EndSeqNo should be the last of the range.
- (iii) To request all messages after a particular message. The BeginSeqNo should be the sequence number immediately after that of the last processed message and the EndSeqNo should be zero (0).

# 5.3 Logon Message Processing - Next Expected Message Sequence



The session initiator should supply the NextExpectedMsgSeqNum (789) the value next expected from the session acceptor in MsgSeqNum (34). The session acceptor should validate the logon request including that NextExpectedMsgSeqNum (789) does not represent a gap. It then constructs its logon response with NextExpectedMsgSeqNum (789) containing the value next expected from the session initiator in MsgSeqNum (34) having incremented the number above the logon request if that was the sequence expected.

The session initiator must wait until the logon response is received in order to submit application messages. Once the logon response is received, the initiator must validate that NextExpectedMsgSeqNum (789) does not represent a gap.

In case of gap detection from either party (lower than the next to be assigned sequence) recover all messages<sup>1</sup> from the last message delivered prior to the logon through the specified NextExpectedMsgSeqNum (789) sending them in order, then gap fill over the sequence number used in logon and proceed sending newly queued messages with a sequence number one higher than the original logon.

Neither side should generate a resend request based on MsgSeqNum (34) of the incoming Logon message but should expect any gaps to be filled automatically by following the Next Expected Sequence processing described above<sup>1</sup>.

Note that indicating the NextExpectedMsgSeqNum (789) in the Logon (35=A) is mandatory.

# **5.4** Possible Duplicates

The OCG-C handles possible duplicates according to the FIX protocol. The client and the OCG-C use the PossDupFlag (43) field to indicate that a message may have been previously transmitted with the same MsgSeqNum (34).

#### **5.5** Possible Resends

#### 5.5.1 Client Initiated Messages

The OCG-C does not handle possible resends for the client-initiated messages (e.g., New Order, Quote, etc.) and the message will be processed without considering the value in the PossResend (97) field. Any message with duplicate ClOrdID (11) will be rejected based on the Client Order ID uniqueness check and messages which conform to the uniqueness check will be processed as normal messages.

#### **5.5.2 OCG-C Initiated Messages**

The OCG-C may use the PossResend (97) field to indicate that an application message may have already been sent under a different MsgSeqNum (34). The client should validate the contents (e.g., ExecID (17)) of such a message against those of messages already received during the current trading day to determine whether the new message should be ignored or processed.

#### 5.6 Gap Fills

The following messages are expected to be skipped using gap-fills when being retransmitted:

- 1. Logon
- 2. Logout
- 3. Heartbeat
- 4. Test Request
- 5. Resent Request

<sup>&</sup>lt;sup>1</sup> During the period where the OCG-C is resending messages to the client, the OCG-C does not allow another Resend Request from the client. If a new Resend Request is received during this time, the OCG-C will terminate the session immediately without sending the Logout message.



#### 6. Sequence Reset

All other messages are expected to be replayed within a retransmission.

# 5.7 Transmission of Missed Messages

The Execution Report, Order Mass Cancel Report, Quote Status Report, Trade Capture Reports/Acks, Business Message Reject and Reject messages generated during a period when a client is disconnected from the OCG-C will be sent to the client when it next reconnects. In the unlikely event the disconnection was due to an outage of the OCG-C, Business Message Reject and Reject messages may not be retransmitted and the messages which will be retransmitted will include a PossResend (97) set to Y = Yes.



# 6. Service Description

# 6.1 Data Types

Data Types used are based on the published standard FIX specifications.

# 6.2 Security Identification

Instruments will be identified using the SecurityID (48) field. It is required to specify SecurityIDSource (22) as Exchange Symbol (8) and SecurityExchange (207) as XHKG (FIX exchange code for HKEX). Security ID (48) with leading zeroes will not be accepted.

# 6.3 Party Identification

Party Identification is defined as follows:

| ID   | Description  | FIX Tag and Value                       |
|--|--|---|
| Broker ID <sup>1</sup>   | Identifier of the member the interest is submitted under   | PartyRole (452)=1 and<br>PartyID (448)  |
| Submitting Broker ID   | Identifier of the entering member the interest is submitted under, if different from Broker ID mentioned above | PartyRole (452)=36 and<br>PartyID (448) |
| Contra Broker ID   | Identifier of the Contra member the interest is submitted under  | PartyRole (452)=17 and<br>PartyID (448) |
| BS User ID <sup>2</sup>  | The location ID of the member as referred to by Broker ID or Submitting Broker ID                              | PartyRole (452)=75 and<br>PartyID (448) |
| BCAN Field <sup>3</sup> (BCAN stands for Broker-to-Client Assigned Number) | Identifier for the client of the member that the interest is submitted under                                   | PartyRole (452)=3 and<br>PartyID (448)  |

#### Notes:

- 1. Any Broker ID with leading zeroes will be rejected
- 2. BS User ID if specified would be restricted to numeric digits only with possible range of values being 1 to 99,999,999; a value with leading zeroes will be rejected.
- 3. The BCAN Field should consist of a 6-alphanumeric CE number assigned by the SFC, a separator ".", followed by a BCAN which is a randomly assigned number not exceeding 10 digits. For example, if the CE number of a Relevant Regulated Intermediary and the BCAN assigned to the client are ABC123 and 0000002568 respectively, then "ABC123.2568' should be set out in the BCAN Field when submitting the order to SEHK. It should be noted that the BCAN Field would not be echoed back in any of the Execution Report or Trade Capture Report messages.

#### **CE Number Format:**

• 6 alphanumeric CE number

#### Separator Format:

• A full stop character, i.e. "."

#### **BCAN Format:**

- An integer of up to 10 digits that is randomly assigned number and ranges from 100 to 9,999,999,999.

  0 to 99 are reserved.
- Leading zero is not allowed.
- Specific reserved BCAN values (after the relevant CE no.):



- 1 sell only client
- <u>2 aggregated order or aggregat</u>ed off-exchange trade

#### 6.4 Text Field

The Text (58) field sent in any business message from a client will be used as Broker Comment/Broker Reference field, and may not contain more than 10 characters; if the Text field contains more than this permitted number of characters, the additional characters will be truncated.

Additionally, this text field is expected to contain only printable characters excluding any punctuation mark.

# 6.5 Order Handling

# 6.5.1 Order Types

The client may submit the following order types:

| Order Type | Description   | FIX Tag and Value |
|------------|---|-------------------|
| Market     | An order that will execute at the best available prices until it is fully filled. Any remainder will be expired.  | OrderType (40) =1 |
| Limit      | An order that will execute at or better than the specified price. The remainder, if any, is added to the order book or expired in terms of its TimeInForce (59) | OrderType (40) =2 |

#### 6.5.2 Validity Types

The client may submit the following validity types:

| Validity Type             | Description   | FIX Tag and Value                 |
|---------------------------|---|-----------------------------------|
| Day                       | An order that will expire at the end of the day.  | TimeInForce (59) = 0<br>(Default) |
| Immediate or Cancel (IOC) | An order that will be executed on receipt and the remainder, if any, immediately expired. | TimeInForce (59)= 3               |
| Fill or Kill (FOK)        | An order that will be fully executed on receipt or immediately expired                    | TimeInForce (59)= 4               |
| At Crossing               | An order submitted during an Auction  | TimeInForce (59)= 9               |

# 6.5.3 Order, Quote, Trade and Execution Identifiers

#### 6.5.3.1 Client Order ID

The client must ensure each ClOrdID (11) to be unique per Submitting Broker ID as an identifier of the order. The client should comply with the FIX protocol and ensure uniqueness of Client Order IDs across all messages (e.g., New Order, Cancel Request, etc.) across trading days sent under a particular Submitting Broker ID, However during the initial launch (and until further notice) the uniqueness is required to be within a trading day and the contents of Client Order ID would be restricted to numeric digits only with possible range of values being 1 to 99,999,999. Client order IDs with leading zeroes will be rejected by OCG-C.



#### 6.5.3.2 Quote Bid ID, Quote Offer ID and Quote Message ID

The client must ensure BidID (390), OfferID (1867) and QuoteMsgID (1166) to be unique per Submitting Broker ID as an identifier of the quote. Like ClOrdID (11) the client should comply with the FIX protocol and ensure uniqueness of these IDs across all messages sent under a particular Submitting Broker ID. Quote Bid ID, Quote Offer ID or Quote Message ID with leading zeroes will be rejected by OCG-C.

The client must, in terms of the FIX protocol, specify:

- BidID and OfferID when submitting a Quote
- QuoteMsgID when submitting a Quote Cancel

BidID, OfferID and QuoteMsgID will be treated the same as ClOrdID from the perspective of uniqueness, contents and restrictions.

#### 6.5.3.3 Trade Report ID

The client must ensure each TradeReportID (571) to be unique per Submitting Broker ID as an identifier of the trade in the Trade Capture Reports sent by the client. Like ClOrdID (11) the client should comply with the FIX protocol and ensure uniqueness of Trade Report IDs sent in the Trade Capture Reports under a particular Submitting Broker ID.

A TradeReportID is required to be unique within a trading day and the contents of this ID would be restricted to numeric digits only with possible range of values being 1 to 99,999,999. However, TradeReportID need not be unique across all ClOrdID equivalent fields (such as BidID, OfferID, QuoteMsgID etc). Trade Report IDs with leading zeroes will be rejected by OCG-C.

#### 6.5.3.4 Order ID

The OCG-C will use the OrderID (37) field of the Execution Report (35=8) to keep track of orders with the trading system.

In terms of the FIX protocol, unlike ClOrdID which requires a chaining through cancel/replace requests and cancel requests, the OrderID of an order will remain constant throughout its life. However with the OCG-C, when a cancel/replace request results in a successful cancel/replace order in the market, the replaced order will be assigned a new OrderID.

The client has the option to either specify the OrderID when submitting a Cancel Request or a Cancel/Replace Request or not. However, in the event where the client is submitting a Cancel Request on behalf of another OCG-C session, the OrderID must be specified in the Cancel Request message.

# 6.5.3.5 Trade ID

The OCG-C will use the TradeID (1003) field of the Trade Capture Report (35=AE) to identify a trade in the event that the client requests to cancel/reject reported off-exchange trade (subject to applicable rules).

#### 6.5.3.6 Execution ID

The OCG-C will use the ExecID (17) field to affix a unique identifier for each Execution Report. ExecID value will be unique per trading day.

#### 6.5.4 Order Submission

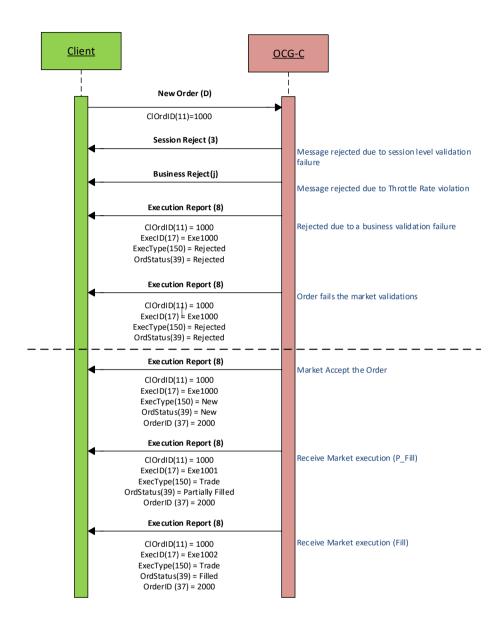
Single sided orders can be submitted into the OCG-C using the New Order (35=D) and the updates to the order submitted will be published in the form of Execution Reports (35=8).

The client must specify the ClOrdID (11) when submitting a New Order message.



For a Limit order, the Order Price must be specified whereas for a Market order Price must not be present; any order submission that does not adhere to this will be rejected.

# 6.5.4.1 Message Flow - New Order



#### 6.5.5 Cancellations

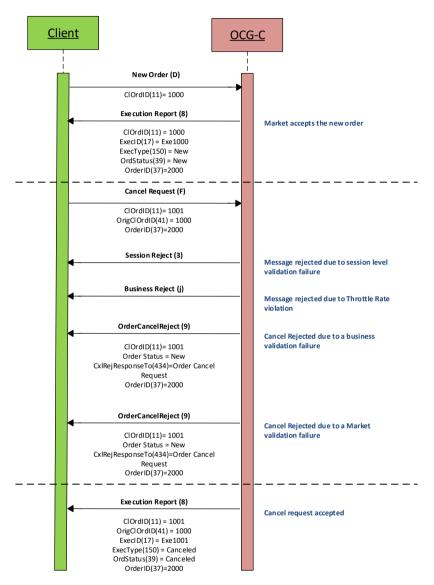
The remainder of a live order may be cancelled via the Cancel Request (35=F) message. The OCG-C will respond with an Execution Report (35=8) to confirm or Cancel Reject (35=9) message for a rejection.

The client should identify the order being cancelled by its OrigClOrdID (41). The client can specify the OrderID (37) in the Cancel Request message but it is not a mandatory requirement. If the OrderID (37) is specified in the Cancel Request message, the system will validate the specified OrderID with the actual OrderID assigned to the particular order by the system (order is identified by the OrigClOrdID). The Cancel Request will be rejected if the specified OrderID is invalid based on this validation.



The client may not cancel an order that is fully filled/cancelled/expired. If the client sends a cancel request for an order for which an amendment or a cancellation is already being processed the incoming cancel request will be rejected.

# 6.5.5.1 Message Flow - Cancel Request



# 6.5.6 Mass Cancellation

A client may mass cancel live orders via the Mass Cancel Request (35=q) message. The OCG-C will respond with an Order Mass Cancel Report (35=r) to confirm or reject the mass cancellation request.

If the Mass Cancel Request is accepted, the OCG-C will respond with an Order Mass Cancel Report where the MassCancelResponse (531) field will reflect the action taken by the OCG-C as a result of the Mass Cancel Request. The OCG-C will generate an Execution Report (35=8) for each order that is cancelled due to the Mass Cancel Request.

If the Mass Cancel Request is rejected, the OCG-C will respond with an Order Mass Cancel Report with MassCancelResponse (531) = 0 (Cancel Request Rejected). The MassCancelRejectReason (532) will indicate the reason why the Mass Cancel Request was rejected.



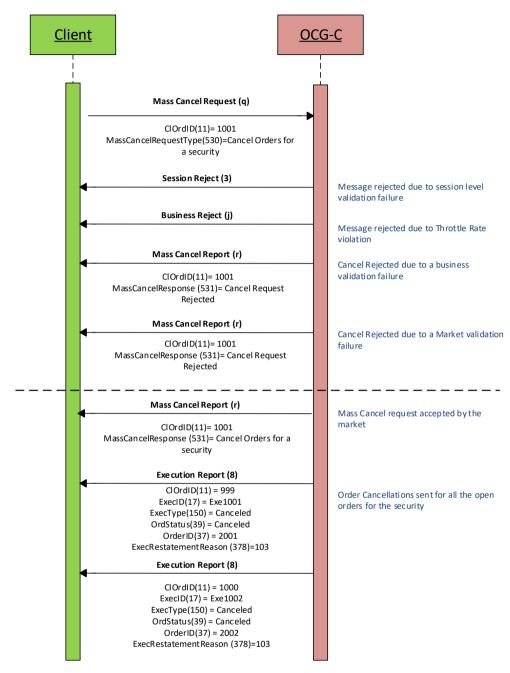
The client may use the Mass Cancel Request to mass cancel all orders, mass cancel orders for a particular instrument or a market segment by specifying the applicable mass cancel type in the MassCancelRequestType (530) field. All orders to be mass cancelled here must belong to the given BrokerID (448) associated with this client.

Though a Mass Cancellation request is accepted by the OCG-C, an individual order cancellation depends on the prevailing trading state of the instrument(s) when the mass cancellation request is received by the trading system. This is also applicable to OBO Mass Cancellation request.

The FIX tags relevant to each of the supported mass cancel types are outlined below:

| Description                            | FIX Tag and Value               |  |
|--|---------------------------------|--|
| Cancel all orders                      | MassCancelRequestType (530) = 7 |  |
| Cancel all orders for a security ID    | MassCancelRequestType (530) = 1 |  |
|  | SecurityID (48)                 |  |
|  | SecurityIDSource (22) =8        |  |
|  | SecurityExchange (207) = XHKG   |  |
| Cancel all orders for a market segment | MassCancelRequestType (530) = 9 |  |
|  | MarketSegmentID (1300)          |  |

#### 6.5.6.1 Message Flow - Mass Cancel Request



# 6.5.7 On Behalf Of (OBO) Cancellations

OBO Cancel functionality allows a Broker ID to cancel order(s) belonging to another Broker ID within the same member firm (Exchange Participant) but these two Broker IDs must belong to two different sessions, where either of these sessions is through OCG-C and the other may or may not be through OCG-C.

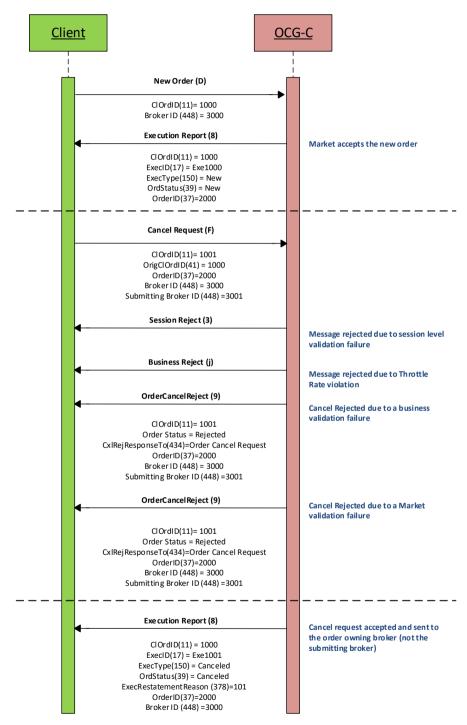
#### 6.5.7.1 OBO Cancel Order

The client can perform an OBO Cancel for a single order by specifying the OrderID (37) as well as the Broker ID (PartyID = 448, PartyRole = 1) that originally sent the order along with the Broker ID (PartyID = 448, PartyRole = 36) that is submitting this cancel request through Order Cancel Request (35=F) message.



In case the request is rejected the OCG-C will respond with a Cancel Reject (35=9) to the submitter of the Cancel request. In the case of successful order cancellation, the Execution Report (35=8) will be sent to the owner of the order as opposed to the submitter of the Cancel Request and no message will be sent to the submitter of the OBO cancel order request.

#### 6.5.7.2 Message Flow - OBO Cancel Request



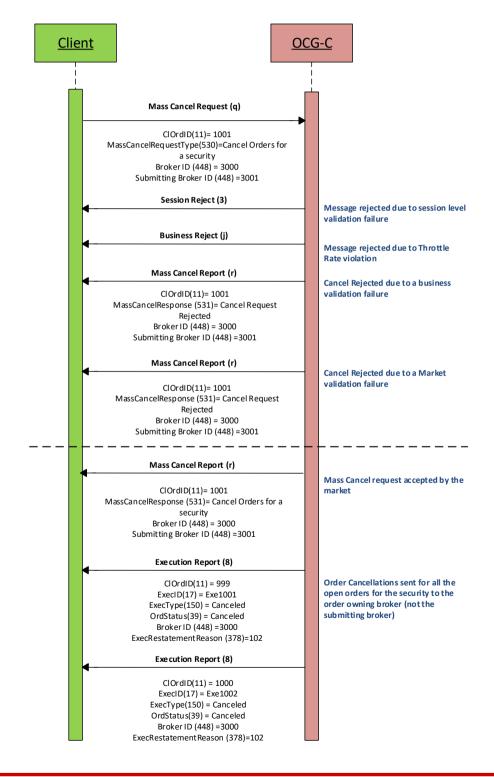
#### 6.5.7.3 OBO Mass Order Cancellation

The client can perform an OBO Mass Cancel for a selected set of orders based on the MassCancelRequestType (530) field in the OrderMassCancelRequest (35=q) message. In case the request is rejected, the OCG-C will be respond with an OrderMassCancelReport (35=r)



message. If the request is accepted then the OCG-C will respond with an OrderMassCancelReport (35=r) message. These responses will be sent to the submitter of the Mass Cancel Request. In the case of successful order cancellations, Execution Report (35=8) will be generated for each order that is cancelled and but this will be sent to the owner of the individual order. It should be noted that OBO Mass Cancel is developed to safeguard EPs' interests in case of emergency. For this reason this function should be used only in emergency situations such as malfunctioning of the original OCG-C session, but not on a day-to-day basis to cancel orders on behalf of other working OCG-C sessions.

# 6.5.7.4 Message Flow - OBO Mass Cancel Request





#### 6.5.8 Amending an Order

Order attributes of a single sided order can be amended using the Order Cancel/Replace Request message. The following attributes of a live order may be amended:

- Order Quantity
- Price
- Side (the only amendment allowed is to change from Sell to Sell Short and vice versa)
- Order Capacity
- Short Sell Indication (using OrderRestrictions / PositionEffect)
- Disclosure Instruction
- Text
- Broker Location ID

The OCG-C will respond with an Execution Report (35=8) to confirm or Cancel Reject (35=9) to reject the Cancel/Replace Request sent by the client.

The client should identify the order being amended by its OrigClOrdID (41). The client may or may not specify the OrderID (37) in the Cancel/Replace Request message. If the OrderID is specified in the Cancel/Replace Request message, it must be the OrderID assigned to this particular order as identified using the OrigClOrdID. The Cancel/Replace Request will be rejected if the specified OrderID is invalid based on this validation.

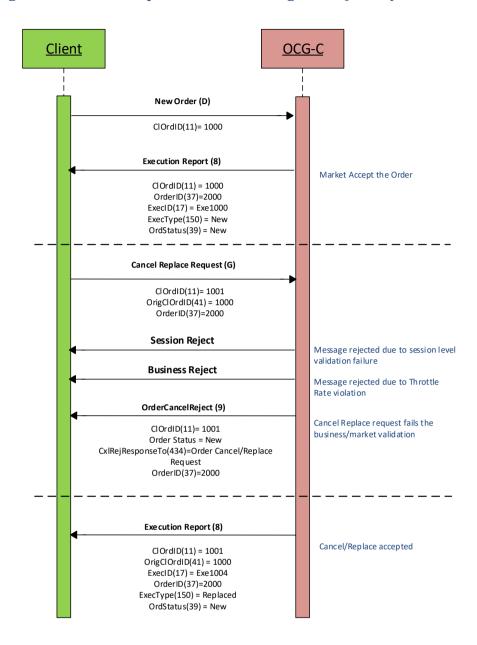
The client may not amend an order that is fully filled or cancelled or expired.

If the client sends a Cancel/Replace Request for an order for which a Cancel/Replace or a Cancel request is already being processed the incoming Cancel/Replace request is rejected.

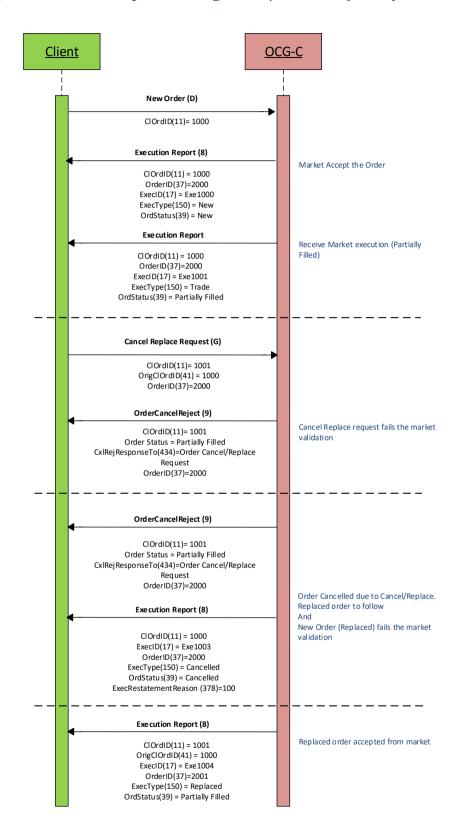
The OCG-C will facilitate order chaining up to the maximum limit of 99,999,999 and will reject subsequent requests to amend if the OrderQty (38) of the amend request exceeds this value.



# 6.5.8.1 Message Flow - Amend Request - No Price Change + No Quantity Increase



# 6.5.8.2 Message Flow - Amend Request - Change Price / Increase Quantity



#### 6.5.9 Cancel Auto-matched Trades

A trade already concluded for an order could be cancelled by the HKEX Market Operations. A trade cancel will be communicated to the client(s) via an Execution Report (35=8). The



Execution Report will include the ExecRefID (19) in order to identify the particular trade which is being cancelled.

If a trade is cancelled in this manner, system will not reinstate the LeavesQty (151) of that order by the busted (cancelled) quantity. In this specific scenario OrderQty (38) will NOT be equal to the summation of the LeavesQty (151) + CumQty (14) – cumulative executed quantity.

# **Execution Reports**

The Execution Report (35=8) message is used to communicate many different events to the client. The events are differentiated by the value in the ExecType (150) field as outlined below:

| ExecType (150)   | Description  | OrdStatus (39)  |
|------------------|--|---|
| 0 = New          | Order Accepted Indicates that a new order has been accepted.   | ■ 0 = New   |
| 8 = Rejected     | Order Rejected Indicates that an order has been rejected. The reason for the rejection is specified in the field OrdRejReason (103).   | ■ 8 = Rejected  |
| C = Expired      | Order Expired Indicates that an order has been expired. OrigClOrdID field will not be provided in this Execution Report.   | ■ C = Expired   |
| F = Trade        | Order Executed (Trade) Indicates that an order has been partially or fully filled. The execution details (e.g., price and quantity) are specified.   | <ul><li>1 = Partially Filled</li><li>2 = Filled</li></ul>   |
| 4 = Cancelled    | Order Cancelled Indicates that an Order Cancel Request has been accepted and successfully processed. This message can also be sent unsolicited in which case the Execution Report may include the ExecRestatementReason field to indicate the reason for cancellation; OrigClOrdID field will not be provided. | ■ 4 = Cancelled   |
| 5 = Replaced     | Order Replaced Indicates that an Order Cancel/Replace Qequest has been accepted and successfully processed.  | <ul> <li>0 = New</li> <li>1 = Partially Filled</li> <li>2 = Filled</li> </ul>   |
| H = Trade Cancel | Trade Cancel Indicates that an execution has been cancelled by Market Operations. The message will include an ExecRefID to identify the execution being cancelled and the updated execution details (e.g., price and quantity).  | <ul> <li>0 = New</li> <li>1 = Partially Filled</li> <li>2 = Filled</li> <li>4 = Cancelled</li> <li>C = Expired</li> </ul> |



#### 6.5.10 Order Status

The previous section broadly covers the OrdStatus (39) values for different types of executions. For a rejection of Order Cancel Request (35=F) or Order Cancel/Replace Request (35=G) request, the following possible states are returned in the Order Cancel Reject (35=9) message:

- 0 = New
- 1 = Partially Filled
- 2 = Filled
- 4 = Cancelled
- 6 = Pending Cancel
- 8 = Rejected
- A = Pending New
- C = Expired
- E = Pending Replace

# 6.6 Quote Handling

Quotes are input or modified as a two-sided (i.e. bid and offer) order pair. If one side of a quote fails the basic validations (e.g., price is not on tick, quantity is not on lot size, etc.), then both sides will be rejected. However, if a quote is accepted it is treated as two separate and independent limit orders where each of these two orders may be accepted or rejected (due to business validation failures).

Quotes may be submitted individually via the Quote (35=S) message.

The client should not specify the QuoteResponseLevel (301) in the Quote message. By default system will consider the QuoteResponseLevel as 1 = Acknowledge only negative or erroneous quotes.

#### 6.6.1 Acknowledgement

The OCG-C will respond with Execution Report(s) (35=8) to confirm the Quote message. If the Quote message is rejected the OCG-C will respond with a Quote Status Report (35=AI) message.

The OCG-C will explicitly reject each Quote message via the Quote Status Report (35=AI) message with QuoteStatusfield (297) set to 5 = Rejected; the QuoteRejectReason (300) will indicate the reason why the Quote is rejected.

#### 6.6.2 Execution

The Execution Report (35=8) message is used to notify the client if a Quote is executed. The ClOrdID (11) of the Execution Report will contain either the BidID (390) or the OfferID (1867) of the last Quote message based on the executed side of the Quote (bid or offer).

#### 6.6.3 Updating a Quote

The client may update a live quote entry by sending another quote, via the Quote message, for the same instrument. When submitting an update, the client may:

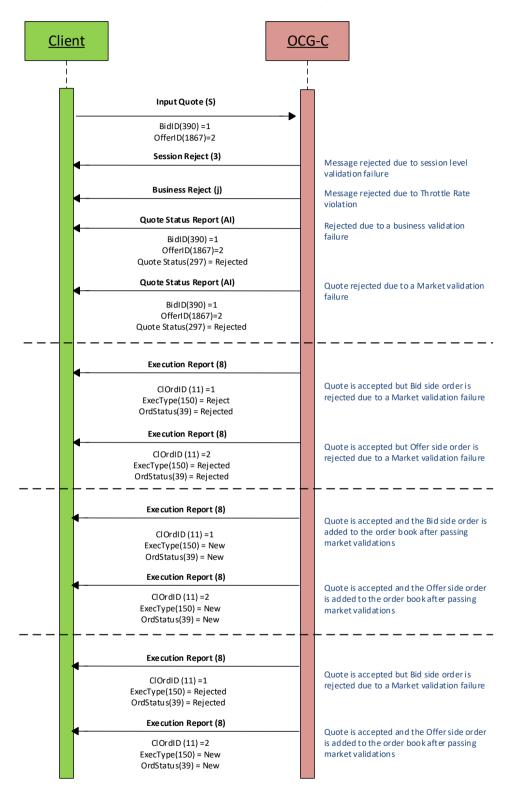
- (i) Update both sides of a quote
- (ii) Update one side of a quote and leave the other side unchanged

The client may update a side of a quote by providing a new price and/or quantity.



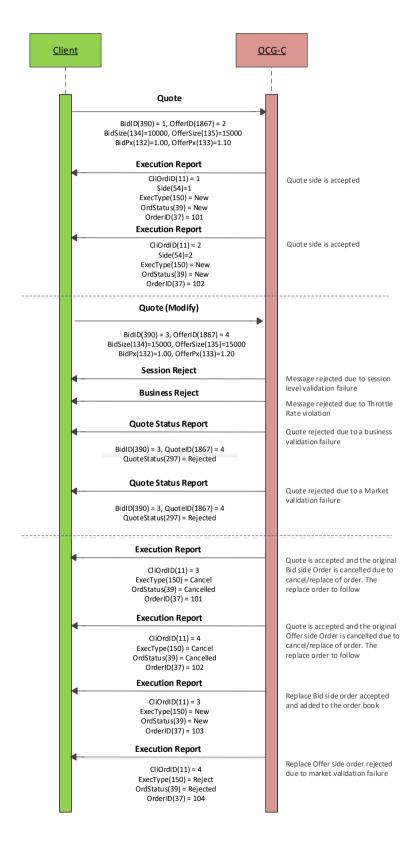
# 6.6.4 Message Flow

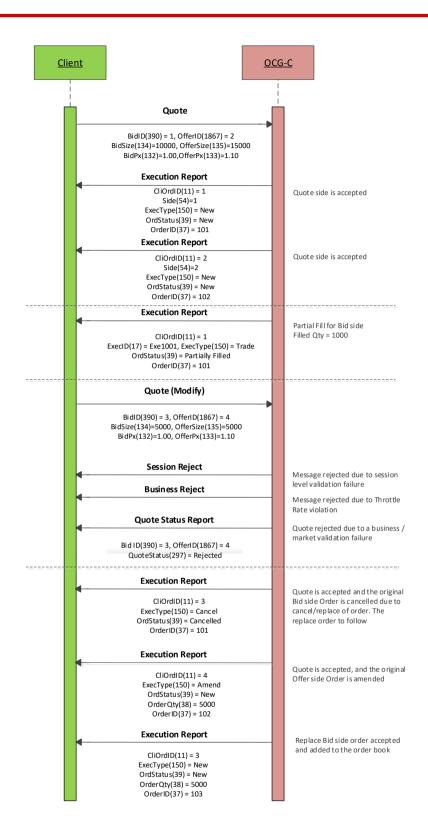
Client submits a new two sided quote via the Quote message:





The client submits a quote to modify an existing quote in the market which results in order cancel/replace at the market:





Client OCG-C Continued from previous Message Flow diagram here Quote (Modify) BidID(390) = 5OfferID (1867) = 6 Session Reject Message rejected due to session level validation failure **Business Reject** Message rejected due to Throttle Rate violation **Quote Status Report** Quote rejected due to a business validation failure BidID (390) = 5 OfferID (1867) = 6QuoteStatus (297)= Rejected **Quote Status Report** Quote rejected due to a Market validation failure BidID(390) = 5OfferID (1867) = 6QuoteStatus (297)= Rejected **Execution Report** Client OrderID (37) = 5 Quote is accepted and the original ExecType (150) = Replaced Bid side Order is updated with the OrdStatys (39) = New/Partially Filled new quote bid side attributes. OrderID (37) = 2002

The client submits a quote to modify an existing quote in the market which results in order updates at the market:

# 6.6.5 Cancelling a Quote

The client may use the Quote Cancel (35=Z) message to cancel a single quote entry. The message should include a QuoteCancelType (298) of Cancel for Instruments (1). The OCG-C will respond with Execution Report(s) (35=8) for successful cancellation.

Quote is accepted and the original

new quote offer side attributes.

Offer side Order is undated with the

**Execution Report** 

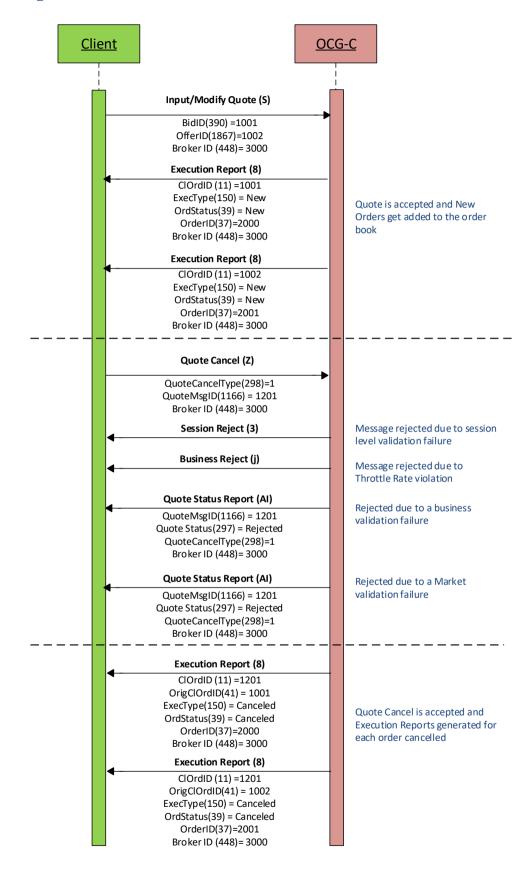
Client OrderID (37) = 6

ExecType (150) = Replaced

OrdStatys (39) = New/Partially Filled OrderID (37) = 2003

If the Quote Cancel message is rejected the OCG-C will respond with a Quote Status Report (35=AI) message. The QuoteStatus (297) field will be set to 5 = Rejected and QuoteRejectReason (300) field will indicate the reason for rejection when a Quote Status Report is generated.

# 6.6.5.1 Message Flow





### 6.7 Trade Report Handling

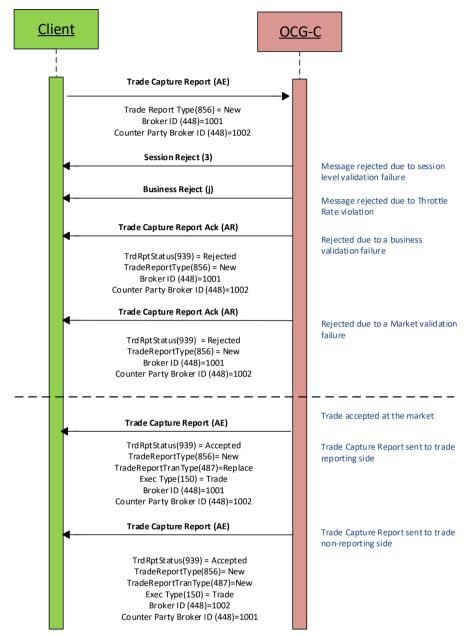
The client may use the Trade Capture Report (35=AE) message to report an off exchange trade or to cancel an alleged off exchange trade. In order to report an off exchange trade, the TradeReportType (856) field must be set to 0 = Submit and in the case of cancelling a trade, this field must be set to 6 = Trade Report Cancel.

#### 6.7.1 Trade Acknowledgement

Once a Trade is accepted, two Trade Capture Reports (35=AE) will be sent (if the trade has two sides) independently to the two Broker IDs (buyer and seller broker IDs) involved in the trade with ExecType (150) set to F = Trade. The TradeReportTransType (487) field of the Trade Capture Report will be set as 2 = Replace for the reporting side and as 0 = New for the counterparty side of the trade.

The OCG-C will explicitly reject Trade message via the Trade Capture Report Ack (35=AR) message to the submitter of the Trade Capture Report message. The TrdRptStatus (939) field will indicate whether the trade is 1 = Rejected, or not. If a trade is rejected, the reason will be specified in the TradeReportRejectReason (751) field.

#### 6.7.1.1 Message Flow



### 6.7.2 Trade Cancel

Purchasing side of an off-exchange trade may cancel the reported trade by submitting a Trade Capture Report (35=AE) message with TradeReportType (856) field set to 6 = Trade Report Cancel.

#### 6.7.3 Trade Cancel Acknowledgement

Once a Trade Cancel is accepted, two Trade Capture Reports will be sent (if the trade has two sides) independently to the two Broker IDs (buyer and seller broker IDs) involved in the trade with ExecType (150) set to H = Trade Cancel. The TradeReportTransType (487) field of the Trade Capture Report will be set as 2 = Replace for the side that submits this cancel request and as 0 = New for the counterparty side of the trade.

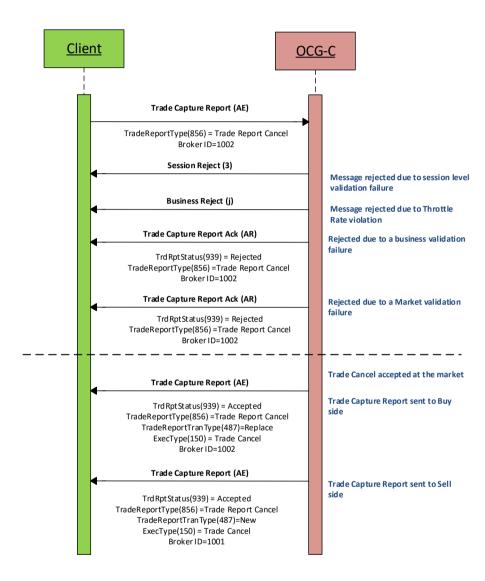
The OCG-C will explicitly reject a Trade Cancel message via the Trade Capture Report Ack (35=AR) message to the submitter of the cancel request. The TrdRptStatus (939) field will



indicate whether the trade is 1 = Rejected, or not. If a trade cancel request is rejected, the reason will be specified in the TradeReportRejectReason (751) field.

#### 6.7.3.1 Message Flow

Trade Capture Report submitted by the purchasing side of the reported trade to cancel/reject the trade:



#### 6.7.4 BCAN Field Submission by Purchasing Side

If the alleged trade is correct, purchasing side of the alleged off exchange trade needs to submit the BCAN Field of purchase side to Exchange via Trade Capture Report (35=AE) message where the TradeReportType (856) must be set to 4 = Addendum. BCAN Field submission is mandatory for alleged trade quantity greater than or equal to one board lot and is optional for alleged trade quantity less than one board lot.

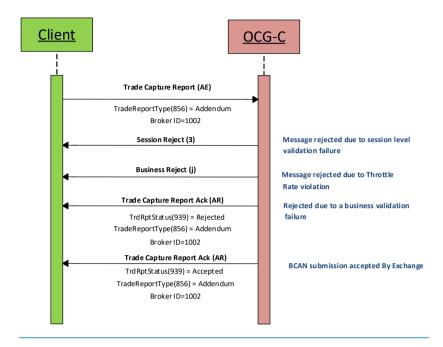
#### 6.7.5 BCAN Field Submission Acknowledgement

After submitting the BCAN Field to Exchange, purchasing side will receive Trade Capture Report Ack (35=AR) from OCG-C with TrdRptStatus (939) field setting to 0 = Accepted if the BCAN Field submission is accepted, otherwise the TrdRptStatus (939) field is set to 1 = Rejected with reason specified in the TradeReportRejectReason (751) field.



#### 6.7.5.1 Message Flow

<u>Trade Capture Report submitted by the purchasing side of the reported trade to provide the BCAN Field of purchase side to Exchange:</u>



### 6.8 Odd Lot/Special Lot Order Handling

The OCG-C supports Odd lot/Special Lot order related functions in semi-automatic trading. The functions here include:

- submission of new order,
- cancellation of existing order and
- reporting a trade against a specific resting order

The OCG-C uses the following matrix for the acknowledgements, confirmations and executions:

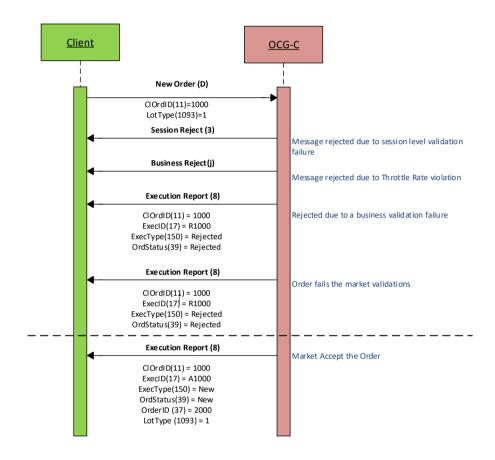
| Business Scenario   | Odd lot/Special Lot Order<br>Submitting Broker | Trade Submitting Broker          |
|---|--|----------------------------------|
| Odd lot/Special lot New Order –<br>Confirmation/Rejection | Execution Report (35=8)                        | N/A                              |
| Odd lot/Special lot Cancel –<br>Confirmation              | Execution Report (35=8)                        | N/A                              |
| Odd lot/Special lot Cancel –<br>Rejection                 | Cancel Reject (35=9)                           | N/A                              |
| Odd lot/Special lot Trade –<br>Accepted                   | Execution Report (35=8)                        | Trade Capture Report (35=AE)     |
| Odd lot/Special lot Trade –<br>Rejected                   | N/A  | Trade Capture Report Ack (35=AR) |
| Odd lot/Special lot Trade –<br>Cancelled                  | Execution Report (35=8)                        | Trade Capture Report (35=AE)     |



#### 6.8.1 Order Submission

Similar to a board lot order submission, single sided odd lot/special lot orders can be submitted to the OCG-C using the New Order (35=D). The OCG-C identifies this being an odd lot/special lot order using LotType (1093) = 1 - Odd Lot.

#### 6.8.1.1 Message Flow - New Odd lot/Special lot Order



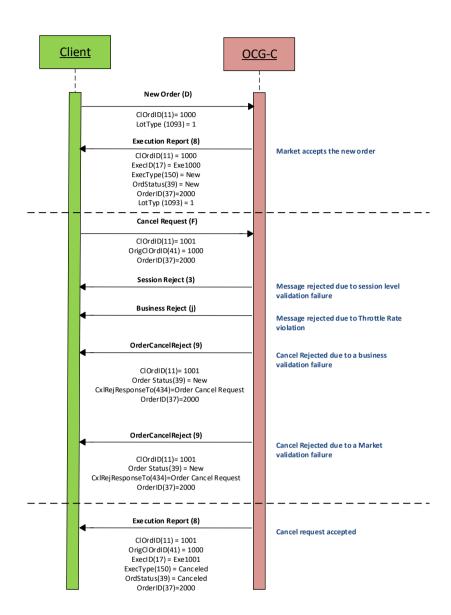
### 6.8.2 Order Cancellation

As for an odd lot/special lot order, a resting odd lot/special lot order may be cancelled via the Cancel Request (35=F) message. The OCG-C will respond with an Execution Report (35=8) to confirm or Cancel Reject (35=9) message for a rejection.

The client should identify the order being cancelled by its OrigClOrdID (41). The client can specify the OrderID (37) in the Cancel Request message but it is not a mandatory requirement. If the OrderID (37) is specified in the Cancel Request message, the system will validate the specified OrderID with the actual OrderID assigned to the particular order by the system (order is identified by the OrigClOrdID). The Cancel Request will be rejected if the specified OrderID is invalid based on this validation.

The client may not cancel an odd lot/special lot order that is fully filled/cancelled/expired. If the client sends a cancel request for an order for which a cancellation is already being processed the incoming cancel request will be rejected.

#### 6.8.2.1 Message Flow - Cancel Request



#### 6.8.3 Order Amendment

An odd lot/special lot order may not be amended. Any amendment request for an odd lot/special lot order will be rejected by the OCG-C.

### 6.8.4 Trade Request

A semi-automatic odd lot/special lot trade request, pointing to a resting order (i.e., existing open order) may be submitted using Trade Capture Report (35=AE) message.

Since Trade Capture Report (35=AE) message can also be used to report an off-exchange trade, the OCG-C will identify the incoming Trade Capture Report (35=AE) being a semi-automatic odd lot/special lot trade if:

- TrdType (828) = 102 Odd Lot Trade, and
- Existence of OrderID (37) in the details of the Side (54) opposite to submitting side.



If the above criteria is not met then the OCG-C will treat the incoming Trade Capture Report (35=AE) as an off-exchange trade to be reported as described in Section <u>6.7</u>.

If the trade is accepted by the market then:

- Trade Capture Report submitter will receive a Trade Capture Report (35=AE) confirming the acceptance, and
- The resting order owner will receive a trade through Execution Report (35=8) to confirm the trade.

Note that this resting order should be considered as fully filled.

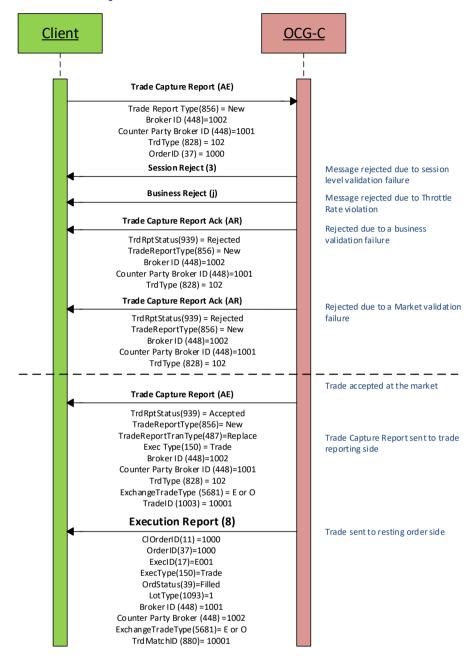
Whether the confirmed trade is odd lot or special lot may be determined by ExchangeTradeType (5681) as follows:

- E = Special Lot
- O = Odd Lot

If the trade is not accepted then the Trade Capture Report submitter will receive a Trade Capture Report Ack (35=AR) carrying the reason for rejection.

Once the trade is accepted, it can be cancelled subsequently only by the exchange.

### 6.8.4.1 Message Flow - Trade Request



### 6.9 Message Rejection

### 6.9.1 Session Level Reject

If an incoming message violates any message level validations such as data type mismatches or message structure mismatches, the messages are expected to be rejected back to the sender using a Reject (35=3) message (applicable to both the client and the OCG-C).

#### 6.9.2 Business Message Reject

Business Message Reject (35=j) will be used in rejecting any business message due to application level validation failures such as MPS rate violations, conditionally required field violations, etc.



#### 6.10 Cancel On Disconnect

At the request of the member firm, all live orders (board lot and odd lot/special lot) and quotes submitted under a Comp ID can be configured to be automatically cancelled whenever the OCG-C identifies an abrupt disconnection of the client session in the following scenarios:

- OCG-C detects a network-level disconnection from the client without a Logout message prior to this disconnection,
- OCG-C detects that the client session is inactive with no heartbeats being received for the specified interval of time as described in Section 4.3.

The OCG-C supports a delayed cancellation of orders once the OCG-C triggers the Cancel on Disconnect scenario. In this case, the actual cancellation is initiated upon the abrupt disconnection plus the delay duration as specified for the client session; if within this delay duration the client is able to re-establish the session, then cancellation will be not triggered. Also, the Cancel on Disconnect will not be triggered due to an internal HKEX OCG-C system outage or failure.

This feature does not guarantee that all live orders will be successfully cancelled as executions that occur very near to the time of disconnect may not be reported to the client. It also depends on the market/instrument trading state when the cancellation is received by HKEX securities trading system.

If the OCG-C activates the Cancel on Disconnect feature for the client, on a subsequent successful login this client will receive the execution report messages for the cancelled orders, if any.

This optional feature is provided as an alternative to the cancellation submission on behalf of the EP's manual process at present.

The configuration of the Cancel on Disconnect feature cannot be altered during a FIX session intra-day.

#### 6.11 Message Rate Throttling

HKEX has implemented a scheme for throttling message traffic where each Comp ID is only permitted to submit up to a specified number of business messages per second (MPS).

The client can request for message rate entitlement information pertaining to that client by sending a User Request (35=BE) message and the OCG-C will reply with a User Response (35=BF) message to convey the message rate entitlement information.

Every message that exceeds the maximum rate of a Comp ID will be rejected via a Business Message Reject; the Text field within the Business Message Reject will indicate the remaining throttle interval time.

HKEX reserves the right to drop the client session with or without sending a Logout (35=5) message to the client, if that client is found to be excessively violating the message rate.

### **6.12 Party Entitlements**

The client can request for entitlement information for Broker IDs of that client via Party Entitlement Request (35=CU) Message. If the Request is accepted, Party Entitlement Report (35=CV) message will carry the entitlement information.



# 7. Message Definitions

# 7.1 Supported Message Types

All supported message types initiated by the client or the OCG-C:

| #   | Message                         | Message | Usage   |
|-----|---------------------------------|---------|---|
|     |                                 | Туре    |   |
| 1.  | Heartbeat                       | 0       | Allows the client and the OCG-C to exercise the communication line during periods of inactivity and verify that the interfaces at each end are available. |
| 2.  | Test Request                    | 1       | Allows the client or the OCG-C to request a response from the other party if inactivity is detected.  |
| 3.  | Resend Request                  | 2       | Allows for the recovery of messages lost during a malfunction of the communications layers.   |
| 4.  | Reject                          | 3       | Used to reject a message that does not comply with session level validations.   |
| 5.  | Sequence Reset                  | 4       | Allows the client or the OCG-C to increase the expected incoming sequence number of the other party.  |
| 6.  | Logon                           | А       | Allows the client and the OCG-C to establish a FIX session.   |
| 7.  | Logout                          | 5       | Allows the client and the OCG-C to terminate a FIX session.   |
| 8.  | Business Message Reject         | j       | Indicates that an application message could not be processed  |
| 9.  | Execution Report                | 8       | Indicates one of the following:  Order Accepted  Order Rejected  Order Expired  Order Cancelled  Trade  Trade Cancel                                      |
| 10. | Order Cancel Reject             | 9       | Indicates that either a Cancel or Cancel/Replace request has been rejected  |
| 11. | New Order – Single              | D       | Allows the client to submit a new order.  |
| 12. | Order Cancel Request            | F       | Allows the client to cancel a live order in the execution venue.  |
| 13. | Order Cancel Replace<br>Request | G       | Allows the client to amend specific attributes a live order.  |
| 14. | Mass Cancel Request             | q       | Allows the client to mass cancel:  All live orders.   |



| #   | Message                    | Message | Usage   |
|-----|----------------------------|---------|---|
|     |                            | Туре    |   |
|     |                            |         | <ul> <li>All live orders for a particular instrument.</li> <li>All live orders for a particular market segment.</li> </ul>  |
| 15. | Order Mass Cancel Report   | r       | <ul> <li>Indicates one of the following</li> <li>Mass cancel request accepted.</li> <li>Mass cancel request rejected.</li> </ul>  |
| 16. | Quote                      | S       | Allows the client to submit a quote for a single instrument.  |
| 17. | Quote Cancel               | Z       | Allows the client to cancel a quote for a particular instrument.  |
| 18. | Quote Status Report        | Al      | Indicates one of the following:  Quote rejected  Request to cancel a quote rejected   |
| 19. | Trade Capture Report       | AE      | Indicates one of the following:  Trade Submit Trade Cancel  |
| 20. | Trade Capture Report Ack   | AR      | Indicates one of the following:  Reject Trade  Reject Trade Cancel  |
| 21. | OBO Cancel Request         | F       | Allows the client to cancel a live order in the execution venue on behalf of another user.  |
| 22. | OBO Mass Cancel Request    | q       | Allows the client to carry out mass cancellations on behalf of another user at the following order levels:  All live orders.  All live orders for a particular instrument.  All live orders for a particular market segment |
| 23. | User Request               | BE      | Allows the client to request for throttle entitlement details   |
| 24. | User Response              | BF      | Response to the User Request  |
| 25. | Party Entitlements Request | CU      | Request entitlement information for Exchange participant  |
| 26. | Party Entitlements Report  | CV      | Response to Party Entitlements Request  |

# 7.2 In-bound Messages

In addition to the Session-level messages, the following lists the messages that are sent by the client to the OCG-C:

- 1. New Order Single (35=D)
- 2. Order Cancel Request (35=F)
- 3. Order Cancel/Replace Request (35=G)



- 4. Order Mass Cancel Request (35=q)
- 5. Quote (35=S)
- 6. Quote Cancel (35=Z)
- 7. Trade Capture Report (35=AE)
- 8. User Request (35=BE)
- 9. Party Entitlements Request (35=CU)

### 7.3 Out-bound Messages

In addition to the Session-level messages, the following lists the messages that are sent by the OCG-C to the client:

- 1. Execution Report (35=8)
- 2. Order Cancel Reject (35=9)
- 3. Business Message Reject (35=j)
- 4. Order Mass Cancel Report (35=r)
- 5. Quote Status Report (35=AI)
- 6. Trade Capture Report (35=AE)
- 7. Trade Capture Report Ack (35=AR)
- 8. User Response (35=BF)
- 9. Party Entitlements Response (35=CV)

### 7.4 Message Header

All messages exchanged between the client and the OCG-C have the following standard message header:

| FIX Tag | Field Name      | Required? | Description   |
|---------|-----------------|-----------|---|
| 8       | BeginString     | Υ         | Always FIXT.1.1   |
| 9       | BodyLength      | Υ         | Number of bytes after this field up to and including the delimiter immediately preceding the CheckSum.  |
| 35      | MsgType         | Υ         | Message type.   |
| 49      | SenderCompID    | Υ         | Comp ID of the party sending the message.   |
| 56      | TargetCompID    | Υ         | Comp ID of the party the message is sent to.  |
| 34      | MsgSeqNum       | Υ         | Sequence number of the message.   |
| 43      | PossDupFlag     | N         | Indicates whether the message was previously transmitted under the same MsgSeqNum (34).  Absence of this field is interpreted as original transmission (N).                                 |
| 97      | PossResend      | N         | Indicates whether the message was previously transmitted under a different MsgSeqNum (34).  Absence of this field is interpreted as original transmission (N).                              |
| 52      | SendingTime     | Υ         | Time the message was transmitted.   |
| 122     | OrigSendingTime | N         | Time the message was originally transmitted.  If the original time is not available, this should be the same value as SendingTime (52).  Required if PossDupFlag (43) is Possible Duplicate |



| FIX Tag | Field Name | Required? | Description  |
|---------|------------|-----------|--|
|         |            |           | (Y).   |
|         |            |           |  |
| 1128    | ApplVerID  | N         | Version of FIX used in the message:                |
|         |            |           | ■ 9 = FIX50SP2                                     |
|         |            |           | Required if the message is generated by the OCG-C. |

### 7.5 Message Trailer

All messages exchanged between the client and the OCG-C have the following standard message trailer:

| FIX Tag | Field Name | Required? | Description  |
|---------|------------|-----------|--|
| 10      | CheckSum   | Υ         | Standard check sum described by FIX protocol.  |
|         |            |           | Always last field in the message; i.e. serves, with the trailing <soh>, as the end-of-message delimiter.</soh> |
|         |            |           | Always defined as three characters.  |

# 7.6 Administrative Messages

### 7.6.1 Logon (A)

This message is initiated by the client and the OCG-C may respond with the same message.

| FIX Tag | Field Name              | Required? | Description   |  |  |
|---------|-------------------------|-----------|---|--|--|
| Message | Message Header          |           |   |  |  |
| 35      | MsgType                 | Υ         | A = Logon   |  |  |
| Message | Body                    |           |   |  |  |
| 98      | EncryptMethod           | Υ         | Method of encryption. ■ 0 = None/Other  |  |  |
| 108     | HeartBtInt              | Υ         | Indicates the heartbeat interval in seconds.  |  |  |
| 789     | NextExpectedMsgSeqNum   | Υ         | Next expected MsgSeqNum value to be received.   |  |  |
| 1400    | EncryptedPasswordMethod | N         | Enumeration defining the encryption method used to encrypt password fields:  101 = RSA  |  |  |
| 1402    | EncryptedPassword       | N         | Encrypted password – encrypted via the method specified in EncryptedPasswordMethod (1400). Padding scheme supported is PKCS #1 or OAEP.     |  |  |
| 1404    | EncryptedNewPassword    | N         | Encrypted new password – encrypted via the method specified in EncryptedPasswordMethod (1400). Padding scheme supported is PKCS #1 or OAEP. |  |  |



| 1409      | SessionStatus        | N | Status of the FIX session.  Required if the message is generated by the OCG-C.  |  |  |
|-----------|----------------------|---|---|--|--|
| 1137      | DefaultApplVerID     | Υ | Default version of FIX messages used in this session:  9 = FIX50SP2   |  |  |
| 464       | TestMessageIndicator | N | Can be used to specify that this FIX session will be sending and receiving "test" vs. "production" messages  Only applicable for Logon (35=A) message from the OCG-C to the client. |  |  |
| 58        | Text                 | N | Text field will be used to convey the number of days to password expiry when the OCG-C replies with a Logon (35=A) message upon a successful logon attempt.                         |  |  |
| Message 1 | Message Trailer      |   |   |  |  |

EncryptedPassword (1402) <u>must be present</u> in the Logon message (35=A) initiated by the client.

### 7.6.2 Logout (5)

This message can be initiated by both client and the OCG-C.

| FIX Tag | Field Name     | Required? | Description  |  |  |
|---------|----------------|-----------|--|--|--|
| Message | <u>Header</u>  |           |  |  |  |
| 35      | MsgType        | Υ         | 5 = Logout   |  |  |
| Message | Message Body   |           |  |  |  |
| 1409    | SessionStatus  | N         | Status of the FIX session.  Required if the message is generated by the OCG-C. |  |  |
| 58      | Text           | N         | Textual reason for the logout.   |  |  |
| Message | <u>Trailer</u> |           |  |  |  |

### 7.6.3 **Heartbeat (0)**

This message can be initiated by both client and OCG-C.

| FIX Tag | Field Name     | Required? | Description  |  |  |  |
|---------|----------------|-----------|--|--|--|--|
| Message | Message Header |           |  |  |  |  |
| 35      | MsgType        | Υ         | 0= Heartbeat   |  |  |  |
| Message | Body           |           |  |  |  |  |
| 112     | TestReqID      | N         | Required if the heartbeat is a response to a TestRequest (35=1). The value in this field should echo the TestReqID (112) received in the TestRequest . |  |  |  |
| Message | <u>Trailer</u> |           |  |  |  |  |



# 7.6.4 Test Request (1)

This message can be initiated by both the client and the OCG-C.

| FIX Tag | Field Name     | Required? | Description  |  |  |
|---------|----------------|-----------|--|--|--|
| Message | Message Header |           |  |  |  |
| 35      | MsgType        | Υ         | 1= Test Request  |  |  |
| Message | Message Body   |           |  |  |  |
| 112     | TestReqID      | Υ         | Identifier included in Test Request message to be returned in resulting Heartbeat. |  |  |
| Message | <u>Trailer</u> |           |  |  |  |

# 7.6.5 Resend Request (2)

This message can be initiated by both client and the OCG-C.

| FIX Tag   | Field Name     | Required? | Description   |
|-----------|----------------|-----------|---|
| Message   | <u>Header</u>  |           |   |
| 35        | MsgType        | Υ         | 2= Resend Request   |
| Message   | Body           |           |   |
| 7         | BeginSeqNo     | Υ         | Sequence number of the first message expected to be resent.   |
| 16        | EndSeqNo       | Y         | Sequence number of the last message expected to be resent.  This may be set to 0 to request the sender to transmit ALL messages starting from BeginSeqNo (7). |
| Message ' | <u>Trailer</u> |           |   |

# 7.6.6 Reject (3)

This message is initiated by the OCG-C.

| FIX Tag | Field Name     | Required? | Description  |  |  |  |
|---------|----------------|-----------|--|--|--|--|
| Message | Message Header |           |  |  |  |  |
| 35      | MsgType        | Υ         | 3= Reject  |  |  |  |
| Message | Message Body   |           |  |  |  |  |
| 45      | RefSeqNum      | Υ         | Sequence number of the message which caused the rejection  |  |  |  |
| 371     | RefTagID       | N         | If a message is rejected due to an issue with a particular field its tag number will be indicated. |  |  |  |
| 372     | RefMsgType     | N         | Message type of the rejected message.  |  |  |  |



| 373       | SessionRejectReason | N | Code specifying the reason for the reject:  0 = Invalid Tag Number 1 = Required Tag Missing 2 = Tag not defined for this message 3 = Undefined tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 9 = CompID problem 10 = Sending Time Accuracy problem 11 = Invalid Msg Type 13 = Tag appears more than once 15 = Repeating group fields out of order 16 = Incorrect NumInGroup count for repeating group 18 = Invalid/Unsupported Application Version 99 = Other |
|-----------|---------------------|---|--|
| 58        | Text                | N | Text specifying the reason for the rejection.  |
| Message ' | <u>Trailer</u>      |   |  |

# 7.6.7 Sequence Reset (4)

This message can be initiated by both client and the OCG-C.

| FIX Tag | Field Name     | Required? | Description   |  |  |  |  |
|---------|----------------|-----------|---|--|--|--|--|
| Message | Message Header |           |   |  |  |  |  |
| 35      | MsgType        | Υ         | 4= Sequence Reset   |  |  |  |  |
| Message | Message Body   |           |   |  |  |  |  |
| 36      | NewSeqNo       | Υ         | Sequence number of the next message to be transmitted.  |  |  |  |  |
| 123     | GapFillFlag    | N         | Mode in which the message is being used.  Absence of this field is interpreted as Sequence Reset (N). |  |  |  |  |
| Message | <u>Trailer</u> |           |   |  |  |  |  |



# 7.7 Business Messages - Order Handling

# 7.7.1 New Board Lot Order - Single (D)

This message is initiated by the client to send a new board-lot order.

| F             | IX Tag         | Field Name                      | Required? | Description   |  |  |
|---------------|----------------|---------------------------------|-----------|---|--|--|
| Me            | Message Header |                                 |           |   |  |  |
|               | 35             | MsgType                         | Υ         | D = New Order Single  |  |  |
| Me            | ssage Bo       | dy                              |           |   |  |  |
|               | 11             | ClOrdID                         | Υ         | Client specified identifier of the order.   |  |  |
| Con           | nponent B      | lock <parties></parties>        |           |   |  |  |
|               | 453            | NoPartyIDs                      | Υ         | Number of party identifiers. The value in this field should be $\frac{1-or}{2}$ or $\frac{3}{2}$ .  |  |  |
| $\rightarrow$ | 448            | PartyID                         | Υ         | ID of the Broker client submitting the order: Broker Number/BS User ID/BCAN Field   |  |  |
| $\rightarrow$ | 447            | PartyldSource                   | Υ         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |  |  |
| <b>→</b>      | 452            | PartyRole                       | Y         | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is submitting this order) - mandatory  3 = Client ID (BCAN Field) - mandatory  75 = Location ID (BS User ID)   |  |  |
| End           | Compone        | ent Block                       |           |   |  |  |
| Con           | nponent B      | llock <instrument></instrument> |           |   |  |  |
|               | 48             | SecurityID                      | Υ         | Instrument identifier   |  |  |
|               | 22             | SecurityIDSource                | Υ         | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |  |  |
|               | 207            | SecurityExchange                | N         | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |  |  |
| End           | Compone        | ent Block                       |           |   |  |  |
|               | 18             | ExecInst                        | N         | <ul> <li>Instructions for order handling:</li> <li>c (lower case C) = Ignore Price Validity Checks</li> <li>x (lower case X) = Ignore Notional Value Checks</li> <li>If either is missing, the respective check will be performed:</li> <li>Absence of this field is interpreted as None (i.e. system will perform both Price and Notional Value check).</li> </ul> |  |  |



| 40          | OrdType                          | Υ   | Order type applicable to the order:  1 = Market 2 = Limit  |
|-------------|----------------------------------|-----|--|
| 58          | Text                             | N   | Free Text  |
| 59          | TimeInForce                      | N   | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> </ul> Absence of this field is interpreted as 0 = Day.    |
| 54          | Side                             | Y   | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
| 38          | OrderQty                         | Υ   | Total order quantity of the order  |
| 44          | Price                            | N   | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
| 60          | TransactTime                     | Υ   | The time at which the particular message was generated.  |
| 77          | PositionEffect                   | N   | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close  Applicable only if Side (54) = 1 (Buy) to indicate covering a short sell.  |
| 528         | OrderCapacity                    | N   | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |
| 529         | OrderRestrictions                | N   | Restrictions associated with this order:  2 = Index Arbitrage  5 = Acting as Market Maker or Specialist in Security  6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short) |
| 1090        | MaxPriceLevels                   | N   | Maximum number of price levels to trade through.  Applicable if:  Order Type (40) = 2 (Limit).  If present, this should be set as 1.   |
| Component B | lock < Disclosure Instruction Gr | .b> |  |
| 1812        | NoDisclosureInstructions         | Υ   | Number of disclosure instructions below.   |



| <b>→</b>      | 1813      | Disclosure Type        | Y | <ul> <li>Type of disclosure instruction to convey:</li> <li>100 = None (No specific information to disclose)</li> <li>It is a mandatory field for future use. EP should specify Disclosure Type 100 with Disclosure Instruction (1814) = 1 for completeness.</li> </ul> |
|---------------|-----------|------------------------|---|---|
| $\rightarrow$ | 1814      | Disclosure Instruction | Υ | Instruction to disclose information or to use default values of the receiver:  1 = Yes  |
| End           | Compone   | ent Block              |   |   |
| Mes           | ssage Tra | ailer                  |   |   |

# 7.7.2 New Odd Lot/Special Lot Order - Single (D)

This message is initiated by the client to send a new odd lot/special lot order to the market.

| FI            | X Tag          | Field Name                     | Required? | Description  |  |
|---------------|----------------|--------------------------------|-----------|--|--|
| Me            | Message Header |                                |           |  |  |
|               | 35             | MsgType                        | Υ         | D = New Order Single   |  |
| Me            | ssage Bo       | dy                             |           |  |  |
|               | 11             | ClOrdID                        | Υ         | Client specified identifier of the order.  |  |
| Con           | ponent B       | lock <parties></parties>       |           |  |  |
|               | 453            | NoPartyIDs                     | Υ         | Number of party identifiers. The value in this field should be 1 or $2 \frac{\text{or } 3}{\text{.}}$ .  |  |
| $\rightarrow$ | 448            | PartyID                        | Y         | ID of the Broker client submitting the order:<br>Broker Number/BS User ID/BCAN Field   |  |
| $\rightarrow$ | 447            | PartyldSource                  | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |  |
| <b>→</b>      | 452            | PartyRole                      | Y         | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is submitting this order) - mandatory  3 = Client ID (BCAN Field) - mandatory for special lot order with OrderQty >= 1 board lot; optional for odd lot order with OrderQty < 1 board lot  75 = Location ID (BS User ID) |  |
| End           | Compone        | ent Block                      |           |  |  |
| Com           | ponent B       | lock <instrument></instrument> |           |  |  |
|               | 48             | SecurityID                     | Υ         | Instrument identifier  |  |
|               | 22             | SecurityIDSource               | Y         | Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified  |  |



|               | 207       | SecurityExchange                 | N   | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |
|---------------|-----------|----------------------------------|-----|---|
| End           | Compone   | ent Block                        |     |   |
|               | 18        | Execinst                         | N   | Instructions for order handling:  x (lower case X) = Ignore Notional Value Checks  Absence of this field is interpreted as None (i.e. system will perform Notional Value check).  |
|               | 40        | OrdType                          | Υ   | Order type applicable to the order:  2 = Limit  |
|               | 58        | Text                             | N   | Free Text   |
|               | 59        | TimeInForce                      | N   | Time qualifier of the order:  0 = Day (Default)  Absence of this field is interpreted as 0 = Day.   |
|               | 54        | Side                             | Y   | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
|               | 38        | OrderQty                         | Υ   | Total order quantity of the order   |
|               | 44        | Price                            | N   | Price of order.  Required if:  OrdType (40) = 2 = Limit.  |
|               | 60        | TransactTime                     | Υ   | The time at which the particular message was generated.   |
|               | 77        | PositionEffect                   | N   | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close  Applicable only if Side (54) = 1 (Buy) to indicate covering a short sell.   |
|               | 528       | OrderCapacity                    | N   | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal  |
| Con           | nponent B | lock < Disclosure Instruction Gr | -p> |   |
| :             | 1812      | NoDisclosureInstructions         | Υ   | Number of disclosure instructions below.  |
| $\rightarrow$ | 1813      | Disclosure Type                  | Υ   | <ul> <li>Type of disclosure instruction to convey:</li> <li>100 = None (No specific information to disclose)</li> <li>It is a mandatory field for future use. EP should specify Disclosure Type 100 with Disclosure Instruction (1814) = 1 for completeness.</li> </ul> |
| $\rightarrow$ | 1814      | Disclosure Instruction           | Υ   | Instruction to disclose information or to use default values of the receiver:  1 = Yes  |
|               |           |                                  |     |   |



| End Component Block |         |   |  |  |  |
|---------------------|---------|---|--|--|--|
| 1093                | LotType | N | Lot Type of the order:  1 = Odd Lot See Notes. |  |  |
| Message Trailer     |         |   |  |  |  |

#### Notes:

- 1. This message will be treated as a request for new board lot order (as in Section 7.7.1) if:
  - LotType (1093) is present but value is 2, or
  - LotType (1093) is absent

# 7.7.3 Order Cancel Replace Request (G)

This message is initiated by the client to cancel/replace an existing board-lot order.

| FI  | X Tag          | Field Name               | Required? | Description   |  |  |
|---|----------------|--------------------------|-----------|---|--|--|
| Me  | Message Header |                          |           |   |  |  |
|   | 35             | MsgType                  | Υ         | G = Order Cancel Replace Request  |  |  |
| Me  | ssage Bo       | dy                       |           |   |  |  |
|   | 11             | ClOrdID                  | Y         | Client specified identifier of this cancel/replace request.   |  |  |
|   | 37             | OrderID                  | N         | Order ID of the original order.   |  |  |
|   | 41             | OrigClOrdID              | Υ         | Client Order ID of the order being cancel-replaced.   |  |  |
| Com                                       | nponent B      | lock <parties></parties> |           |   |  |  |
|   | 453            | NoPartyIDs               | Y         | Number of party identifiers. The value in this field should be 1 or 2.  |  |  |
| $\rightarrow$                             | 448            | PartyID                  | Y         | ID of the Broker client submitting the order cancel/replace – Broker ID or BS User ID.  If Broker ID then it must be the same as in the original order.           |  |  |
| $\rightarrow$                             | 447            | PartyldSource            | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |  |  |
| $\rightarrow$                             | 452            | PartyRole                | Υ         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted this order)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |
| End                                       | Compone        | ent Block                |           |   |  |  |
| Component Block <instrument></instrument> |                |                          |           |   |  |  |
|   | 48             | SecurityID               | Υ         | Instrument identifier   |  |  |
|   | 22             | SecurityIDSource         | Y         | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |  |  |



| 207         | SecurityExchange | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |
|-------------|------------------|---|---|
| End Compone | ent Block        |   |   |
| 18          | ExecInst         | N | Instructions for order handling:  c (lower case C) = Ignore Price Validity Checks x (lower case X) = Ignore Notional Value Checks If either is missing, the respective check will be performed: Absence of this field is interpreted as None (i.e. system will perform both Price and Notional Value check).  |
| 40          | OrdType          | Y | Order type applicable to the order:  1 = Market 2 = Limit  This must remain the same as in the original order.  |
| 58          | Text             | N | Free Text   |
| 59          | TimeInForce      | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> <li>Absence of this field is interpreted as 0 = Day.</li> <li>If specified, this must remain the same as in the original order.</li> </ul> |
| 54          | Side             | Υ | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
| 38          | OrderQty         | Υ | Total order quantity of the order   |
| 44          | Price            | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.  |
| 60          | TransactTime     | Υ | The time at which the particular message was generated.   |
| 77          | PositionEffect   | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if Side (54) = 1 (Buy) to indicate covering a short sell.   |
| 528         | OrderCapacity    | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal  |
|             |                  |   |   |



| 52         | 9                   | OrderRestrictions               | N  | <ul> <li>Restrictions associated with this order:</li> <li>2 = Index Arbitrage</li> <li>5 = Acting as Market Maker or Specialist in Security</li> <li>6 = Acting as Market Maker or Specialist in underlying of a derivative security</li> <li>The above 3 values are applicable only if Side (54) = 5 (Sell Short)</li> </ul> |  |
|------------|---------------------|---------------------------------|----|--|--|
| 109        | 90                  | MaxPriceLevels                  | N  | Maximum number of price levels to trade through.  Applicable if:  Order Type (40) = 2 (Limit).  If present, this should be set as 1.  This must be the same as in the original order.  |  |
| Compo      | nent Bl             | lock < DisclosureInstruction Gr | p> |  |  |
| 181        | 12                  | NoDisclosureInstructions        | Υ  | Number of disclosure instructions below.  If none, then the disclosure instructions from the original order will be assumed.   |  |
| <b>→</b> 1 | 1813                | Disclosure Type                 | Y  | <ul> <li>Type of disclosure instruction to convey:</li> <li>100 = None (No specific information to disclose)</li> <li>It is a mandatory field for future use. Client should specify Disclosure Type 100 with Disclosure Instruction (1814) = 1 for completeness.</li> </ul>  |  |
| <b>→</b> 1 | 1814                | Disclosure Instruction          | Y  | Instruction to disclose information or to use default values of the receiver:  1 = Yes   |  |
| End Co     | End Component Block |                                 |    |  |  |
| Messa      | ge Tra              | iler                            |    |  |  |

# 7.7.4 Order Cancel Request (F)

This message is initiated by the client to cancel an existing order (board lot or odd lot/special lot).

| FIX Tag                             | Field Name     | Required? | Description  |  |  |  |
|-------------------------------------|----------------|-----------|--|--|--|--|
| Message He                          | Message Header |           |  |  |  |  |
| 35                                  | MsgType        | Υ         | F = Order Cancel Request   |  |  |  |
| Message Body                        |                |           |  |  |  |  |
| 11                                  | ClOrdID        | Υ         | Client specified identifier of this cancel request.                    |  |  |  |
| 37                                  | OrderID        | N         | Order ID of the original order.  |  |  |  |
| 41                                  | OrigClOrdID    | Υ         | Client Order ID of the order being cancelled.                          |  |  |  |
| Component Block <parties></parties> |                |           |  |  |  |  |
| 453                                 | NoPartyIDs     | Υ         | Number of party identifiers. The value in this field should be 1 or 2. |  |  |  |



| <b>→</b> | 448      | PartyID                        | Y | ID of the Broker client submitting the order cancel request – Broker ID or BS User ID.  If Broker ID then it must be the same as in the original order.           |
|----------|----------|--------------------------------|---|---|
| →        | 447      | PartyldSource                  | Y | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |
| <b>→</b> | 452      | PartyRole                      | Y | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted this order)</li> <li>75 = Location ID (BS User ID)</li> </ul> |
| End      | Compone  | ent Block                      |   |   |
| Com      | ponent B | lock <instrument></instrument> |   |   |
|          | 48       | SecurityID                     | Υ | Instrument identifier   |
|          | 22       | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  ■ 8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |
|          | 207      | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |
| End      | Compone  | ent Block                      |   |   |
|          | 38       | OrderQty                       | Υ | Total order quantity of the order   |
|          | 54       | Side                           | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
|          | 58       | Text                           | N | Free Text   |
|          | 60       | TransactTime                   | Υ | The time at which the particular message was generated.   |
| Mes      | sage Tra | <u>iiler</u>                   |   |   |
|          |          |                                |   |   |

# 7.7.5 Mass Cancel Request (q)

This message is initiated by the client to mass cancel board lot and odd/special lot orders.

| FIX Tag    | Field Name     | Required? | Description  |  |  |  |  |
|------------|----------------|-----------|--|--|--|--|--|
| Message He | Message Header |           |  |  |  |  |  |
| 35         | MsgType        | Υ         | q = Order Mass Cancel Request                            |  |  |  |  |
| Message Bo | Message Body   |           |  |  |  |  |  |
| 11         | ClOrdID        | Υ         | Client specified identifier of this mass cancel request. |  |  |  |  |



|               | 530       | MassCancelRequestType          | Y | <ul> <li>Specifies the scope of the mass cancel request:</li> <li>1 = Cancel orders for a Security</li> <li>7 = Cancel all orders</li> <li>9 = Cancel orders for a Market Segment</li> </ul> |
|---------------|-----------|--------------------------------|---|--|
| Con           | nponent B | lock <parties></parties>       |   |  |
|               | 453       | NoPartyIDs                     | Υ | Number of party identifiers. The value in this field should be 1 or 2.   |
| $\rightarrow$ | 448       | PartyID                        | Υ | ID of the Broker client submitting the order mass cancel request – Broker ID or BS User ID.  Orders for the Broker ID specified here will be cancelled.                                      |
| $\rightarrow$ | 447       | PartyldSource                  | Y | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |
| $\rightarrow$ | 452       | PartyRole                      | Y | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID for which orders are to be mass cancelled)</li> <li>75 = Location ID (BS User ID)</li> </ul>            |
| End           | Compone   | ent Block                      |   |  |
| Com           | nponent B | lock <instrument></instrument> |   |  |
|               | 48        | SecurityID                     | N | Instrument identifier Required if: MassCancelRequestType (530) = 1   |
|               | 22        | SecurityIDSource               | N | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
|               | 207       | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End           | Compone   | ent Block                      |   |  |
|               | 54        | Side                           | N | Side of the order  1 = Buy 2 = Sell  |
|               | 1300      | MarketSegmentID                | N | Identifies the Market Segment:  MAIN GEM NASD ETS Required if: MassCancelRequestType (530) = 9 (Cancel Orders for A Market Segment)  |
|               | 60        | TransactTime                   | Υ | The time at which the particular message was generated.  |
| Me            | ssage Tra | <u>ailer</u>                   |   |  |
|               |           |                                |   |  |



### 7.7.6 On Behalf Of Cancels

The client can request to cancel order(s) owned by a Broker ID that belongs to the same firm but different session.

### 7.7.6.1 OBO Cancel Request (F)

This message is initiated by the client to cancel an existing board-lot or odd/special lot order.

| FI            | X Tag        | Field Name                     | Required? | Description   |  |  |  |
|---------------|--------------|--------------------------------|-----------|---|--|--|--|
| Me            | ssage He     | ader_                          |           |   |  |  |  |
|               | 35           | MsgType                        | Υ         | F = Order Cancel Request  |  |  |  |
| Me            | Message Body |                                |           |   |  |  |  |
|               | 11           | ClOrdID                        | Υ         | Client specified identifier of the order.   |  |  |  |
|               | 37           | OrderID                        | Υ         | Order ID of the original order.   |  |  |  |
|               | 41           | OrigClOrdID                    | N         | Client Order ID of the order being cancelled.   |  |  |  |
| Com           | nponent B    | lock <parties></parties>       |           |   |  |  |  |
|               | 453          | NoPartyIDs                     | Υ         | Number of party identifiers. The value in this field should be 2 or 3:  Order Owning Broker ID  Submitting Broker ID  Broker Location ID  |  |  |  |
| $\rightarrow$ | 448          | PartyID                        | Y         | ID of the Broker client submitting the order cancel request – Owner Broker ID, Submitting Broker ID or BS User ID.  |  |  |  |
| $\rightarrow$ | 447          | PartyldSource                  | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |  |  |  |
| $\rightarrow$ | 452          | PartyRole                      | Υ         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>36 = Entering Trader (Broker ID that is submitting this OBO cancel request)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |  |
| End           | Compone      | ent Block                      |           |   |  |  |  |
| Con           | nponent B    | lock <instrument></instrument> |           |   |  |  |  |
|               | 48           | SecurityID                     | Υ         | Instrument identifier   |  |  |  |
|               | 22           | SecurityIDSource               | Υ         | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |  |  |  |
|               | 207          | SecurityExchange               | N         | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |  |  |  |
| End           | Compone      | ent Block                      |           |   |  |  |  |
|               | 38           | OrderQty                       | Υ         | Total order quantity of the order   |  |  |  |



| 54          | Side            | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short      |  |  |  |
|-------------|-----------------|---|---|--|--|--|
| 58          | Text            | N | Free Text   |  |  |  |
| 60          | TransactTime    | Y | The time at which the particular message was generated. |  |  |  |
| Message Tra | Message Trailer |   |   |  |  |  |

# 7.7.6.2 **OBO Mass Cancel (q)**

This message is initiated by the client to mass cancel orders (board lot and odd lot/special Lot).

| FI            | X Tag          | Field Name                     | Required? | Description   |  |  |
|---------------|----------------|--------------------------------|-----------|---|--|--|
| Me            | Message Header |                                |           |   |  |  |
|               | 35             | MsgType                        | Υ         | q = Order Mass Cancel Request   |  |  |
| Me            | ssage Bo       | dy                             |           |   |  |  |
|               | 11             | ClOrdID                        | Y         | Client specified identifier of this mass cancel request.  |  |  |
|               | 530            | MassCancelRequestType          | Y         | <ul> <li>Specifies the scope of the mass cancel request:</li> <li>1 = Cancel orders for a Security</li> <li>7 = Cancel all orders</li> <li>9 = Cancel orders for a Market Segment</li> </ul>  |  |  |
| Con           | nponent B      | lock <parties></parties>       |           |   |  |  |
|               | 453            | NoPartyIDs                     | Y         | Number of party identifiers. The value in this field should be 2 or 3:  Order Owning Broker ID  Submitting Broker ID  Broker Location ID  |  |  |
| $\rightarrow$ | 448            | PartyID                        | Y         | ID of the Broker client submitting the order cancel request – Owner Broker ID, Submitting Broker ID or BS User ID.  |  |  |
| $\rightarrow$ | 447            | PartyldSource                  | Υ         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |  |  |
| <b>→</b>      | 452            | PartyRole                      | Y         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID for which orders to be mass cancelled)</li> <li>36 = Entering Trader (Broker ID that is submitting this OBO mass cancel request)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |
| End           | Compone        | ent Block                      |           |   |  |  |
| Con           | nponent B      | lock <instrument></instrument> |           |   |  |  |
|               | 48             | SecurityID                     | N         | Instrument identifier Required if:  MassCancelRequestType (530) = 1   |  |  |



| 22          | SecurityIDSource | N | Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified                        |  |  |
|-------------|------------------|---|---|--|--|
| 207         | SecurityExchange | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).                 |  |  |
| End Compone | nt Block         |   |   |  |  |
| 54          | Side             | N | Side of the order  1 = Buy 2 = Sell   |  |  |
| 1300        | MarketSegmentID  | N | Identifies the Market Segment:  MAIN GEM NASD ETS Required if: MassCancelRequestType (530) = 9 (Cancel Orders for A Market Segment) |  |  |
| 60          | TransactTime     | Υ | The time at which the particular message was generated.   |  |  |
| Message Tra | Message Trailer  |   |   |  |  |



# 7.7.7 Execution Report (8)

# 7.7.7.1 Order Accepted

The OCG-C will send this execution report once the new order (board lot or odd lot/special Lot) is accepted.

| FI            | IX Tag         | Field Name                     | Required? | Description  |  |  |
|---------------|----------------|--------------------------------|-----------|--|--|--|
| Me            | Message Header |                                |           |  |  |  |
|               | 35             | MsgType                        | Υ         | 8 = Execution Report   |  |  |
| Me            | Message Body   |                                |           |  |  |  |
|               | 11             | ClOrdID                        | Υ         | Client specified identifier of the order.  |  |  |
|               | 37             | OrderID                        | Υ         | Order ID as assigned by the exchange.  |  |  |
|               | 17             | ExecID                         | Y         | Unique Execution ID assigned for each Execution Report generated.  |  |  |
| Com           | nponent B      | lock <parties></parties>       |           |  |  |  |
|               | 453            | NoPartyIDs                     | Υ         | Number of party identifiers. The value in this field can be 1 or 2.  |  |  |
| $\rightarrow$ | 448            | PartyID                        | Υ         | ID of the Broker client submitting the order: Broker ID/BS User ID.  |  |  |
| $\rightarrow$ | 447            | PartyldSource                  | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |  |  |
| $\rightarrow$ | 452            | PartyRole                      | Υ         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |
| End           | Compone        | ent Block                      |           |  |  |  |
| Com           | nponent B      | lock <instrument></instrument> |           |  |  |  |
|               | 48             | SecurityID                     | Υ         | Instrument identifier  |  |  |
|               | 22             | SecurityIDSource               | Υ         | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |  |  |
|               | 207            | SecurityExchange               | N         | The market which is used to identify the security:  XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).   |  |  |
| End           | Compone        | nt Block                       |           |  |  |  |
|               | 40             | OrdType                        | N         | Order type applicable to the order:  1 = Market 2 = Limit  |  |  |



| 59   | TimeInForce       | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> </ul> Absence of this field is interpreted as 0 = Day.  |
|------|-------------------|---|--|
| 54   | Side              | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
| 38   | OrderQty          | N | Total order quantity of the order  |
| 44   | Price             | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
| 60   | TransactTime      | Υ | The time at which the particular message was generated.  |
| 528  | OrderCapacity     | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |
| 529  | OrderRestrictions | N | Restrictions associated with this order:  2 = Index Arbitrage 5 = Acting as Market Maker or Specialist in Security 6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short) |
| 1090 | MaxPriceLevels    | N | Maximum number of price levels to trade through.  Applicable if:  Order Type (40) = 2 (Limit).  If present, this should be set as 1.   |
| 77   | PositionEffect    | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |
| 39   | OrdStatus         | Υ | Order Status after applying the transaction that is being communicated:  • 0 = New   |
| 150  | ЕхесТуре          | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  • 0 = New  |
| 14   | CumQty            | Υ | Cumulative execution size  |
| 151  | LeavesQty         | Υ | Open order quantity  |
| 58   | Text              | N | Free Text  |
|      |                   |   |  |



| 1093            | LotType | N | Lot Type of the order:  1 = Odd Lot 2 = Round Lot |  |  |
|-----------------|---------|---|---|--|--|
| Message Trailer |         |   |   |  |  |

#### Notes:

- 1. If LotType (1093) is present and value is 1, then this execution report caries an odd lot/special lot order,
- 2. If LotType (1093) is present and value is 2, then this execution report caries a board (i.e., round) lot order,
- 3. If LotType (1093) is absent then this execution report caries a board (i.e., round) lot order.

### 7.7.7.2 Order Rejected

The OCG-C will send this execution report once the new order (board lot or odd lot/special Lot) is rejected.

| F             | IX Tag         | Field Name                     | Required? | Description  |  |  |
|---------------|----------------|--------------------------------|-----------|--|--|--|
| Me            | Message Header |                                |           |  |  |  |
|               | 35             | MsgType                        | Υ         | 8 = Execution Report   |  |  |
| Me            | ssage Bo       | dy                             |           |  |  |  |
|               | 11             | ClOrdID                        | Υ         | Client specified identifier of the order.  |  |  |
|               | 37             | OrderID                        | Υ         | Order ID as assigned by the exchange.  |  |  |
|               | 17             | ExecID                         | Υ         | Unique Execution ID assigned for each Execution Report generated.  |  |  |
| Con           | nponent B      | lock <parties></parties>       |           |  |  |  |
|               | 453            | NoPartyIDs                     | Υ         | Number of party identifiers. The value in this field can be 1 or 2.  |  |  |
| $\rightarrow$ | 448            | PartyID                        | Y         | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.   |  |  |
| →             | 447            | PartyldSource                  | Υ         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code                             |  |  |
| $\rightarrow$ | 452            | PartyRole                      | Υ         | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that submitted the order)  75 = Location ID (BS User ID) |  |  |
| End           | Compone        | ent Block                      |           |  |  |  |
| Con           | nponent B      | lock <instrument></instrument> |           |  |  |  |
|               | 48             | SecurityID                     | Υ         | Instrument identifier  |  |  |
|               | 22             | SecurityIDSource               | Y         | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified               |  |  |
|               | 207            | SecurityExchange               | N         | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).          |  |  |



| nt Block          |   |   |
|-------------------|---|---|
| OrdType           | N   | Order type applicable to the order:  1 = Market 2 = Limit   |
| TimeInForce       | N   | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> </ul> Absence of this field is interpreted as 0 = Day. |
| Side              | Y   | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
| OrderQty          | N   | Total order quantity of the order   |
| Price             | N   | Price of order.  Required if:  OrdType (40) = 2 = Limit.  |
| TransactTime      | Υ   | The time at which the particular message was generated.   |
| OrderCapacity     | N   | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal  |
| OrderRestrictions | N   | Restrictions associated with this order:  2 = Index Arbitrage 5 = Acting as Market Maker or Specialist in Security 6 = Acting as Market Maker or Specialist in underlying of a derivative security The above 3 values are applicable only if Side (54) = 5 (Sell Short) |
| MaxPriceLevels    | N   | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.   |
| PositionEffect    | N   | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.   |
| OrdStatus         | Y   | Order Status after applying the transaction that is being communicated:  8 = Rejected   |
|                   |   |   |
|                   | OrdType  TimeInForce  Side  OrderQty Price  TransactTime OrderCapacity  OrderRestrictions  MaxPriceLevels  PositionEffect | OrdType N  TimeInForce N  Side Y  OrderQty N  Price N  TransactTime Y  OrderCapacity N  OrderRestrictions N  MaxPriceLevels N  PositionEffect N   |



| 14              | CumQty       | Υ | Cumulative execution size   |
|-----------------|--------------|---|---|
| 151             | LeavesQty    | Υ | Open order quantity   |
| 103             | OrdRejReason | N | Reject code indicating the reason for the order reject:  3 = Order exceeds Limit  6 = Duplicate order (e.g., dupe ClOrdID)  13 = Incorrect quantity  16 = Price exceeds current price band  19 = Reference price is not available  20 = Notional value exceeds threshold  99 = Other  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band |
| 1328            | RejectText   | N | Textual description of the rejection that is being communicated through this execution report   |
| 58              | Text         | N | Free Text   |
| Message Trailer |              |   |   |

### 7.7.7.3 Order Cancelled

The OCG-C sends this execution report once the Cancel Request for an order (board lot or odd lot/special Lot) is accepted.

| FI                  | X Tag          | Field Name               | Required? | Description  |  |  |
|---------------------|----------------|--------------------------|-----------|--|--|--|
| Mes                 | Message Header |                          |           |  |  |  |
|                     | 35             | MsgType                  | Υ         | 8 = Execution Report   |  |  |
| Mes                 | ssage Bo       | dy                       |           |  |  |  |
|                     | 11             | ClOrdID                  | Υ         | Client specified identifier of the order cancel request.   |  |  |
|                     | 41             | OrigClOrdID              | Υ         | Original client specified identifier for the incoming cancel request   |  |  |
|                     | 37             | OrderID                  | Υ         | Order ID as assigned by the exchange.  |  |  |
|                     | 17             | ExecID                   | Υ         | Unique Execution ID assigned for each Execution Report generated.  |  |  |
| Com                 | ponent B       | lock <parties></parties> |           |  |  |  |
|                     | 453            | NoPartyIDs               | Υ         | Number of party identifiers. The value in this field can be 1 or 2.  |  |  |
| $\rightarrow$       | 448            | PartyID                  | Υ         | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.   |  |  |
| $\rightarrow$       | 447            | PartyldSource            | Υ         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |  |  |
| <b>→</b>            | 452            | PartyRole                | Y         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |
| End Component Block |                |                          |           |  |  |  |



| Component B | lock <instrument></instrument> |   |  |
|-------------|--------------------------------|---|--|
| 48          | SecurityID                     | Υ | Instrument identifier  |
| 22          | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified   |
| 207         | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End Compone | nt Block                       |   |  |
| 40          | OrdType                        | N | Order type applicable to the order:  1 = Market 2 = Limit  |
| 59          | TimeInForce                    | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> <li>Absence of this field is interpreted as 0 = Day.</li> </ul> |
| 54          | Side                           | Υ | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
| 38          | OrderQty                       | N | Total order quantity of the order  |
| 44          | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
| 60          | TransactTime                   | Υ | The time at which the particular message was generated.  |
| 528         | OrderCapacity                  | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |
| 529         | OrderRestrictions              | N | Restrictions associated with this order:  2 = Index Arbitrage  5 = Acting as Market Maker or Specialist in Security  6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short)       |
| 1090        | MaxPriceLevels                 | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.  |



| 77              | PositionEffect | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell. |
|-----------------|----------------|---|---|
| 39              | OrdStatus      | Υ | Order Status after applying the transaction that is being communicated:  4 = Cancelled  |
| 150             | ЕхесТуре       | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  4 = Cancelled   |
| 14              | CumQty         | Υ | Cumulative execution size   |
| 151             | LeavesQty      | Υ | Open order quantity   |
| 58              | Text           | N | Free Text   |
| Message Trailer |                |   |   |

### 7.7.7.4 Order Cancelled - Unsolicited

The OCG-C will send this execution report for an unsolicited cancel of an order (board lot or odd lot/special Lot).

| FI  | X Tag          | Field Name              | Required? | Description  |  |  |
|---|----------------|-------------------------|-----------|--|--|--|
| Mes                                       | Message Header |                         |           |  |  |  |
|   | 35             | MsgType                 | Υ         | 8 = Execution Report   |  |  |
| Mes                                       | ssage Bo       | dy                      |           |  |  |  |
|   | 11             | ClOrdID                 | Υ         | Client specified identifier of the order.  |  |  |
|   | 37             | OrderID                 | Υ         | Order ID as assigned by the exchange.  |  |  |
|   | 17             | ExecID                  | Υ         | Unique Execution ID assigned for each Execution Report generated.  |  |  |
| Com                                       | ponent B       | ock <parties></parties> |           |  |  |  |
|   | 453            | NoPartyIDs              | Υ         | Number of party identifiers. The value in this field can be 1 or 2.  |  |  |
| $\rightarrow$                             | 448            | PartyID                 | Υ         | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.   |  |  |
| $\rightarrow$                             | 447            | PartyldSource           | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |  |  |
| <b>→</b>                                  | 452            | PartyRole               | Y         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |
| End Component Block                       |                |                         |           |  |  |  |
| Component Block <instrument></instrument> |                |                         |           |  |  |  |



| 48          | SecurityID        | Υ | Instrument identifier  |
|-------------|-------------------|---|--|
| 22          | SecurityIDSource  | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
| 207         | SecurityExchange  | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End Compone | ent Block         |   |  |
| 40          | OrdType           | N | Order type applicable to the order:  1 = Market 2 = Limit  |
| 59          | TimeInForce       | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> <li>Absence of this field is interpreted as 0 = Day.</li> </ul> |
| 54          | Side              | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
| 38          | OrderQty          | N | Total order quantity of the order  |
| 44          | Price             | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
| 60          | TransactTime      | Υ | The time at which the particular message was generated.  |
| 528         | OrderCapacity     | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |
| 529         | OrderRestrictions | N | Restrictions associated with this order:  2 = Index Arbitrage 5 = Acting as Market Maker or Specialist in Security 6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short)         |
| 1090        | MaxPriceLevels    | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.  |



| 77          | PositionEffect        | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |
|-------------|-----------------------|---|--|
| 39          | OrdStatus             | Υ | Order Status after applying the transaction that is being communicated:  4 = Cancelled   |
| 150         | ЕхесТуре              | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  4 = Cancelled  |
| 14          | CumQty                | Υ | Cumulative execution size  |
| 151         | LeavesQty             | Υ | Open order quantity  |
| 58          | Text                  | N | Free Text  |
| 378         | ExecRestatementReason | N | Code to identify the reason for an Execution Report message with Exec Type= 4 (Cancel):  6 = Cancel on Trading Halt/VCM  8 = Market Operation  100 = Unsolicited Cancel for original order (for cancel/replace operation which fails market validation)  103 = Mass cancelled by Broker  104 = Cancel On Disconnect  105 = Cancel due to Broker suspension  106 = Cancel due to Exchange Participant suspension  107 = System Cancel |
| Message Tra | <u>niler</u>          |   |  |

### 7.7.7.5 Order Expired

The OCG-C will send this execution report when an order (board lot or odd lot/special Lot) expires.

| FIX Tag                             | Field Name     | Required? | Description   |  |  |  |  |
|-------------------------------------|----------------|-----------|---|--|--|--|--|
| Message He                          | Message Header |           |   |  |  |  |  |
| 35                                  | MsgType        | Υ         | 8 = Execution Report  |  |  |  |  |
| Message Body                        |                |           |   |  |  |  |  |
| 11                                  | ClOrdID        | Υ         | Client specified identifier of the order.                           |  |  |  |  |
| 37                                  | OrderID        | Υ         | Order ID as assigned by the exchange.                               |  |  |  |  |
| 17                                  | ExecID         | Υ         | Unique Execution ID assigned for each Execution Report generated.   |  |  |  |  |
| Component Block <parties></parties> |                |           |   |  |  |  |  |
| 453                                 | NoPartyIDs     | Υ         | Number of party identifiers. The value in this field can be 1 or 2. |  |  |  |  |



| $\rightarrow$ | 448      | PartyID                        | Υ | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.   |
|---------------|----------|--------------------------------|---|--|
| $\rightarrow$ | 447      | PartyldSource                  | Υ | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |
| $\rightarrow$ | 452      | PartyRole                      | Υ | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>75 = Location ID (BS User ID)</li> </ul>   |
| End           | Compone  | nt Block                       |   |  |
| Com           | ponent B | lock <instrument></instrument> |   |  |
|               | 48       | SecurityID                     | Υ | Instrument identifier  |
|               | 22       | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
|               | 207      | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End           | Compone  | nt Block                       |   |  |
|               | 40       | OrdType                        | N | Order type applicable to the order:  1 = Market 2 = Limit  |
|               | 59       | TimeInForce                    | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> <li>Absence of this field is interpreted as 0 = Day.</li> </ul> |
|               | 54       | Side                           | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
|               | 38       | OrderQty                       | N | Total order quantity of the order  |
|               | 44       | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
|               | 60       | TransactTime                   | Υ | The time at which the particular message was generated.  |
|               | 528      | OrderCapacity                  | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |



| 529             | OrderRestrictions | N | <ul> <li>Restrictions associated with this order:</li> <li>2 = Index Arbitrage</li> <li>5 = Acting as Market Maker or Specialist in Security</li> <li>6 = Acting as Market Maker or Specialist in underlying of a derivative security</li> <li>The above 3 values are applicable only if Side (54) = 5 (Sell Short)</li> </ul> |  |
|-----------------|-------------------|---|--|--|
| 1090            | MaxPriceLevels    | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.  |  |
| 77              | PositionEffect    | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |  |
| 39              | OrdStatus         | Υ | Order Status after applying the transaction that is being communicated:  C = Expired   |  |
| 150             | ЕхесТуре          | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  C = Expired  |  |
| 14              | CumQty            | Υ | Cumulative execution size  |  |
| 151             | LeavesQty         | Υ | Open order quantity  |  |
| 1328            | RejectText        | N | Textual description of the reason for expiration   |  |
| 58              | Text              | N | Free Text  |  |
| Message Trailer |                   |   |  |  |

#### 7.7.7.6 **OBO** Cancel

The OCG-C will send this execution report for an OBO cancellation of an order (board lot or odd lot/special Lot).

| FIX Tag                             | Field Name  | Required? | Description   |  |  |
|-------------------------------------|-------------|-----------|---|--|--|
| Message He                          | <u>ader</u> |           |   |  |  |
| 35                                  | MsgType     | Υ         | 8 = Execution Report  |  |  |
| Message Body                        |             |           |   |  |  |
| 11                                  | ClOrdID     | Υ         | Client specified identifier of the order.                           |  |  |
| 37                                  | OrderID     | Υ         | Order ID as assigned by the exchange.                               |  |  |
| 17                                  | ExecID      | Υ         | Unique Execution ID assigned for each Execution Report generated.   |  |  |
| Component Block <parties></parties> |             |           |   |  |  |
| 453                                 | NoPartyIDs  | Υ         | Number of party identifiers. The value in this field can be 1 or 2. |  |  |



| $\rightarrow$ | 448       | PartyID                        | Υ | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.   |
|---------------|-----------|--------------------------------|---|--|
| $\rightarrow$ | 447       | PartyldSource                  | Υ | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |
| <b>→</b>      | 452       | PartyRole                      | Υ | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>75 = Location ID (BS User ID)</li> </ul>   |
| End           | Compone   | nt Block                       |   |  |
| Con           | nponent B | lock <instrument></instrument> |   |  |
|               | 48        | SecurityID                     | Υ | Instrument identifier  |
|               | 22        | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
|               | 207       | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End           | Compone   | nt Block                       |   |  |
|               | 40        | OrdType                        | N | Order type applicable to the order:  1 = Market 2 = Limit  |
|               | 59        | TimeInForce                    | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> <li>Absence of this field is interpreted as 0 = Day.</li> </ul> |
|               | 54        | Side                           | Υ | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
|               | 38        | OrderQty                       | N | Total order quantity of the order  |
|               | 44        | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
|               | 60        | TransactTime                   | Υ | The time at which the particular message was generated.  |
|               | 528       | OrderCapacity                  | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |



| 529         | OrderRestrictions     | N | Restrictions associated with this order:  2 = Index Arbitrage  5 = Acting as Market Maker or Specialist in Security  6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short) |
|-------------|-----------------------|---|--|
| 1090        | MaxPriceLevels        | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.  |
| 77          | PositionEffect        | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |
| 39          | OrdStatus             | Y | Order Status after applying the transaction that is being communicated:  4 = Cancelled   |
| 150         | ЕхесТуре              | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  4 = Cancelled  |
| 14          | CumQty                | Υ | Cumulative execution size  |
| 151         | LeavesQty             | Υ | Open order quantity  |
| 58          | Text                  | N | Free Text  |
| 378         | ExecRestatementReason | N | Code to identify the reason for an Execution Report message with Exec Type= 4 (Cancel):  101 = OBO Single Order Cancel 102 = OBO Mass Order Cancel   |
| Message Tra | <u>iler</u>           |   |  |

# 7.7.7.7 Order Replaced

The OCG-C sends this execution report when a Cancel/Replace request for an order (board lot) is accepted.

| FIX Tag    | Field Name     | Required? | Description  |  |  |  |
|------------|----------------|-----------|--|--|--|--|
| Message He | Message Header |           |  |  |  |  |
| 35         | MsgType        | Υ         | 8 = Execution Report   |  |  |  |
| Message Bo | dy             |           |  |  |  |  |
| 11         | ClOrdID        | Υ         | Client specified identifier of the order cancel request.             |  |  |  |
| 41         | OrigClOrdID    | Υ         | Original client specified identifier for the incoming cancel request |  |  |  |



|               | 37        | OrderID                        | Υ | Order ID as assigned by the exchange.   |
|---------------|-----------|--------------------------------|---|---|
|               | 17        | ExecID                         | Y | Unique Execution ID assigned for each Execution Report generated.   |
| Con           | nponent B | lock <parties></parties>       |   |   |
|               | 453       | NoPartyIDs                     | Υ | Number of party identifiers. The value in this field can be 1 or 2.   |
| $\rightarrow$ | 448       | PartyID                        | Υ | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.  |
| $\rightarrow$ | 447       | PartyldSource                  | Υ | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |
| $\rightarrow$ | 452       | PartyRole                      | Υ | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the order)</li> <li>75 = Location ID (BS User ID)</li> </ul>  |
| End           | Compone   | nt Block                       |   |   |
| Com           | nponent B | lock <instrument></instrument> |   |   |
|               | 48        | SecurityID                     | Υ | Instrument identifier   |
|               | 22        | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |
|               | 207       | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |
| End           | Compone   | nt Block                       |   |   |
|               | 40        | OrdType                        | N | Order type applicable to the order:  1 = Market 2 = Limit   |
|               | 59        | TimeInForce                    | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> </ul> Absence of this field is interpreted as 0 = Day. |
|               | 54        | Side                           | Υ | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
|               | 38        | OrderQty                       | N | Total order quantity of the order   |
|               | 44        | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.  |
|               | 60        | TransactTime                   | Υ | The time at which the particular message was generated.   |
|               |           |                                |   |   |



| 528             | OrderCapacity     | N | Designates the capacity of the firm placing the order:  A = Agency P = Principal  |
|-----------------|-------------------|---|---|
| 529             | OrderRestrictions | N | Restrictions associated with this order:  2 = Index Arbitrage 5 = Acting as Market Maker or Specialist in Security 6 = Acting as Market Maker or Specialist in underlying of a derivative security The above 3 values are applicable only if Side (54) = 5 (Sell Short) |
| 1090            | MaxPriceLevels    | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.   |
| 77              | PositionEffect    | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.   |
| 39              | OrdStatus         | Υ | Order Status after applying the transaction that is being communicated:  O = New 1 = Partially Filled 2 = Filled  |
| 150             | ЕхесТуре          | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  5 = Replaced  |
| 14              | CumQty            | Υ | Cumulative execution size   |
| 151             | LeavesQty         | Υ | Open order quantity   |
| 58              | Text              | N | Free Text   |
| Message Trailer |                   |   |   |

# 7.7.7.8 Trade (Board lot Order Executed)

The OCG-C sends this execution report for an auto-matched trade.

| FIX Tag    | Field Name     | Required? | Description   |  |  |  |
|------------|----------------|-----------|---|--|--|--|
| Message He | Message Header |           |   |  |  |  |
| 35         | MsgType        | Υ         | 8 = Execution Report  |  |  |  |
| Message Bo | dy             |           |   |  |  |  |
| 11         | ClOrdID        | Υ         | Client specified identifier of the order.                         |  |  |  |
| 37         | OrderID        | Υ         | Order ID as assigned by the exchange.                             |  |  |  |
| 17         | ExecID         | Υ         | Unique Execution ID assigned for each Execution Report generated. |  |  |  |



|               | 880       | TrdMatchID                     | N | Identifier assigned to a trade by the matching system  |
|---------------|-----------|--------------------------------|---|--|
| Com           | ponent Bl | lock <parties></parties>       |   |  |
|               | 453       | NoPartyIDs                     | Υ | Number of party identifiers. The value in this field can be 1 or 2 or 3.   |
| $\rightarrow$ | 448       | PartyID                        | Υ | ID of the Broker client submitting the order: Broker ID/Counterparty Broker ID/BS User ID.   |
| <b>→</b>      | 447       | PartyldSource                  | Υ | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |
| <b>→</b>      | 452       | PartyRole                      | Υ | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that is receiving this trade)</li> <li>17 = Contra Firm (Counterparty Broker ID for this trade). This is provided only if applicable.</li> <li>75 = Location ID (BS User ID)</li> </ul> |
| End           | Compone   | nt Block                       |   |  |
| Com           | ponent Bl | lock <instrument></instrument> |   |  |
|               | 48        | SecurityID                     | Υ | Instrument identifier  |
|               | 22        | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
|               | 207       | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End           | Compone   | nt Block                       |   |  |
|               | 40        | OrdType                        | N | Order type applicable to the order:  1 = Market 2 = Limit  |
|               | 59        | TimeInForce                    | N | Time qualifier of the order:  0 = Day (Default) 3 = Immediate or Cancel = IOC 4 = Fill or Kill = FOK 9 = At Crossing. Applicable for orders in Auction session.  Absence of this field is interpreted as 0 = Day.  |
|               | 54        | Side                           | Υ | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
|               | 38        | OrderQty                       | N | Total order quantity of the order  |
|               | 44        | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |



| 60   | TransactTime      | Υ | The time at which the particular message was generated.  |
|------|-------------------|---|--|
| 528  | OrderCapacity     | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |
| 529  | OrderRestrictions | N | Restrictions associated with this order:  2 = Index Arbitrage 5 = Acting as Market Maker or Specialist in Security 6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short) |
| 1090 | MaxPriceLevels    | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.  |
| 77   | PositionEffect    | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |
| 39   | OrdStatus         | Y | Order Status after applying the transaction that is being communicated:  1 = Partially Filled 2 = Filled   |
| 150  | ЕхесТуре          | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  • F = Trade  |
| 31   | LastPx            | Υ | Execution Price  |
| 32   | LastQty           | Υ | Execution Size   |
| 14   | CumQty            | Υ | Cumulative execution size  |
| 151  | LeavesQty         | Υ | Open order quantity  |
| 574  | MatchType         | N | The point in the matching process at which the trade was matched:  4 = Auto match 5 = Cross Auction  |
| 1115 | OrderCategory     | N | Defines the type of interest behind a trade ■ A = Internal Cross Order  Absence of this field means the trade is not concluded within the same firm  |
| 58   | Text              | N | Free Text  |
| 1093 | LotType           | N | Lot Type of the order:  ■ 2 = Round Lot  |
|      |                   |   |  |



| <u>1057</u> | <u>AggressorIndicator</u> | <u>N</u> | Used to identify whether the order initiator is an aggressor or not in the auto-matched trade during continuous trading session:  Y = Order initiator is aggressor  N = Order initiator is passive |  |  |  |
|-------------|---------------------------|----------|--|--|--|--|
| Message Tra | Message Trailer           |          |  |  |  |  |

# 7.7.7.9 Trade (Auto-matched ) Cancelled

The OCG-C sends this execution report when an auto-matched trade is cancelled by the exchange.

| F             | IX Tag         | Field Name                     | Required? | Description   |  |
|---------------|----------------|--------------------------------|-----------|---|--|
| Me            | Message Header |                                |           |   |  |
|               | 35             | MsgType                        | Υ         | 8 = Execution Report  |  |
| Me            | ssage Bo       | dy                             |           |   |  |
|               | 11             | ClOrdID                        | Υ         | Client specified identifier of the order.   |  |
|               | 37             | OrderID                        | Υ         | Order ID as assigned by the exchange.   |  |
|               | 17             | ExecID                         | Υ         | Unique Execution ID assigned for each Execution Report generated.   |  |
|               | 19             | ExecRefID                      | Υ         | Execution Reference identifier used with Trade Cancel; refers to the Exec ID of the original trade.   |  |
| Con           | nponent B      | lock <parties></parties>       |           |   |  |
|               | 453            | NoPartyIDs                     | Υ         | Number of party identifiers. The value in this field can be 1 or 2.   |  |
| $\rightarrow$ | 448            | PartyID                        | Υ         | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.  |  |
| $\rightarrow$ | 447            | PartyldSource                  | Υ         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |  |
| $\rightarrow$ | 452            | PartyRole                      | Υ         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that is receiving this cancel)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |
| End           | Compone        | ent Block                      |           |   |  |
| Con           | nponent B      | lock <instrument></instrument> |           |   |  |
|               | 48             | SecurityID                     | Υ         | Instrument identifier   |  |
|               | 22             | SecurityIDSource               | Υ         | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |  |
|               | 207            | SecurityExchange               | N         | The market which is used to identify the security:  XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).  |  |



| End Compone | ent Block         |   |  |
|-------------|-------------------|---|--|
| 40          | OrdType           | N | Order type applicable to the order:  1 = Market 2 = Limit  |
| 59          | TimeInForce       | N | <ul> <li>Time qualifier of the order:</li> <li>0 = Day (Default)</li> <li>3 = Immediate or Cancel = IOC</li> <li>4 = Fill or Kill = FOK</li> <li>9 = At Crossing. Applicable for orders in Auction session.</li> <li>Absence of this field is interpreted as 0 = Day.</li> </ul> |
| 54          | Side              | Υ | Side of the order  1 = Buy 2 = Sell 5 = Sell Short   |
| 38          | OrderQty          | N | Total order quantity of the order  |
| 44          | Price             | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.   |
| 60          | TransactTime      | Υ | The time at which the particular message was generated.  |
| 528         | OrderCapacity     | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal   |
| 529         | OrderRestrictions | N | Restrictions associated with this order:  2 = Index Arbitrage 5 = Acting as Market Maker or Specialist in Security 6 = Acting as Market Maker or Specialist in underlying of a derivative security The above 3 values are applicable only if Side (54) = 5 (Sell Short)          |
| 1090        | MaxPriceLevels    | N | Maximum number of price levels to trade through.  Applicable if:  OrdType (40) = 2 (Limit).  If present, this should be set as 1.  |
| 77          | PositionEffect    | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |
| 39          | OrdStatus         | Υ | Order Status after applying the transaction that is being communicated:  O = New 1 = Partially Filled 2 = Filled 4 = Cancelled C = Expired   |



| 150             | ЕхесТуре              | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  H = Trade Cancel   |  |
|-----------------|-----------------------|---|--|--|
| 31              | LastPx                | N | Execution Price Will be set to 0   |  |
| 32              | LastQty               | N | Execution Size Will be set to 0  |  |
| 14              | CumQty                | Υ | Cumulative execution size  |  |
| 151             | LeavesQty             | Υ | Open order quantity  |  |
| 1115            | OrderCategory         | N | Defines the type of interest behind a trade  • A = Internal Cross Order  Absence of this field means the trade is not concluded within the same firm |  |
| 58              | Text                  | N | Free Text  |  |
| 378             | ExecRestatementReason | N | Code to identify the reason for an Execution Report message with Exec Type= H (Trade Cancel):  8 = Market (exchange) option                          |  |
| Message Trailer |                       |   |  |  |

# 7.7.7.10 Trade (Odd lot/Special lot Order Executed)

The OCG-C sends this execution report for an Odd lot/Special lot order when it is filled.

| FI            | X Tag          | Field Name               | Required? | Description  |  |
|---------------|----------------|--------------------------|-----------|--|--|
| Mes           | Message Header |                          |           |  |  |
|               | 35             | MsgType                  | Υ         | 8 = Execution Report   |  |
| Mes           | ssage Bo       | dy                       |           |  |  |
|               | 11             | ClOrdID                  | Υ         | Client specified identifier of the order.  |  |
|               | 37             | OrderID                  | Υ         | Order ID as assigned by the exchange.  |  |
|               | 17             | ExecID                   | Υ         | Unique Execution ID assigned for each Execution Report generated.                                |  |
|               | 880            | TrdMatchID               | N         | Identifier assigned to a trade by the matching system  |  |
| Com           | ponent B       | lock <parties></parties> |           |  |  |
|               | 453            | NoPartyIDs               | Υ         | Number of party identifiers. The value in this field can be 1 or 2 or 3.                         |  |
| $\rightarrow$ | 448            | PartyID                  | Υ         | ID of the Broker client submitting the order: Broker ID/Counterparty Broker ID/BS User ID.       |  |
| $\rightarrow$ | 447            | PartyldSource            | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code |  |



| $\rightarrow$ | 452       | PartyRole                      | Υ | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is receiving this trade)   |
|---------------|-----------|--------------------------------|---|---|
|               |           |                                |   | <ul> <li>17 = Contra Firm (Counterparty Broker ID for this trade).</li> <li>This is provided only if applicable.</li> <li>75 = Location ID (BS User ID)</li> </ul>                                |
| End           | Compone   | ent Block                      |   |   |
| Con           | nponent B | lock <instrument></instrument> |   |   |
|               | 48        | SecurityID                     | Υ | Instrument identifier   |
|               | 22        | SecurityIDSource               | Υ | Identifies the source of the SecurityID (48):  ■ 8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |
|               | 207       | SecurityExchange               | N | The market which is used to identify the security:  ■ XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End           | Compone   | ent Block                      |   |   |
|               | 40        | OrdType                        | N | Order type applicable to the order:  2 = Limit  |
|               | 59        | TimeInForce                    | N | Time qualifier of the order:  • 0 = Day (Default)  Absence of this field is interpreted as 0 = Day.   |
|               | 54        | Side                           | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
|               | 38        | OrderQty                       | N | Total order quantity of the order   |
|               | 44        | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.  |
|               | 60        | TransactTime                   | Υ | The time at which the particular message was generated.   |
|               | 528       | OrderCapacity                  | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal  |
|               | 77        | PositionEffect                 | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell. |
|               | 39        | OrdStatus                      | Υ | Order Status after applying the transaction that is being communicated:  2 = Filled   |



| 150             | ЕхесТуре          | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  • F = Trade   |  |
|-----------------|-------------------|---|---|--|
| 31              | LastPx            | Υ | Execution Price   |  |
| 32              | LastQty           | Υ | Execution Size  |  |
| 14              | CumQty            | Υ | Cumulative execution size   |  |
| 151             | LeavesQty         | Υ | Open order quantity   |  |
| 1115            | OrderCategory     | N | Defines the type of interest behind a trade ■ A = Internal Cross Order  Absence of this field means the trade is not concluded within the same firm |  |
| 58              | Text              | N | Free Text   |  |
| 1093            | LotType           | N | Lot Type of the order:  1 = Odd Lot   |  |
| 5681            | ExchangeTradeType | N | <ul> <li>E = Special Lot – Semi-Automatic</li> <li>O = Odd Lot – Semi-Automatic</li> </ul>  |  |
| Message Trailer |                   |   |   |  |

### 7.7.7.11 Trade (Semi-auto-matched) Cancelled

The OCG-C sends this execution report when a semi-auto-matched trade is cancelled by the exchange.

Note that this trade cancellation message is sent to the Side (54) that refers to an Odd lot/Special lot order.

| FI            | X Tag          | Field Name               | Required? | Description   |  |  |
|---------------|----------------|--------------------------|-----------|---|--|--|
| Me            | Message Header |                          |           |   |  |  |
|               | 35             | MsgType                  | Υ         | 8 = Execution Report  |  |  |
| Me            | ssage Bo       | dy                       |           |   |  |  |
|               | 11             | ClOrdID                  | Υ         | Client specified identifier of the order.   |  |  |
|               | 37             | OrderID                  | Υ         | Order ID as assigned by the exchange.   |  |  |
|               | 17             | ExecID                   | Υ         | Unique Execution ID assigned for each Execution Report generated.                                   |  |  |
|               | 19             | ExecRefID                | Υ         | Execution Reference identifier used with Trade Cancel; refers to the Exec ID of the original trade. |  |  |
| Com           | ponent B       | lock <parties></parties> |           |   |  |  |
|               | 453            | NoPartyIDs               | Υ         | Number of party identifiers. The value in this field can be 1 or 2.                                 |  |  |
| $\rightarrow$ | 448            | PartyID                  | Υ         | ID of the Broker client submitting the order:<br>Broker ID/BS User ID.                              |  |  |
| $\rightarrow$ | 447            | PartyldSource            | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code    |  |  |



| <b>→</b> | 452      | PartyRole                      | Y | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is receiving this cancel)  75 = Location ID (BS User ID)   |
|----------|----------|--------------------------------|---|---|
| End      | Compone  | ent Block                      |   |   |
| Com      | ponent B | lock <instrument></instrument> |   |   |
|          | 48       | SecurityID                     | Υ | Instrument identifier   |
|          | 22       | SecurityIDSource               | Y | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |
|          | 207      | SecurityExchange               | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |
| End      | Compone  | ent Block                      |   |   |
|          | 40       | OrdType                        | N | Order type applicable to the order:  2 = Limit  |
|          | 59       | TimeInForce                    | N | Time qualifier of the order:  0 = Day (Default)  Absence of this field is interpreted as 0 = Day.   |
|          | 54       | Side                           | Y | Side of the order  1 = Buy 2 = Sell 5 = Sell Short  |
|          | 38       | OrderQty                       | N | Total order quantity of the order   |
|          | 44       | Price                          | N | Price of order.  Required if:  OrdType (40) = 2 = Limit.  |
|          | 60       | TransactTime                   | Υ | The time at which the particular message was generated.   |
|          | 528      | OrderCapacity                  | N | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal  |
|          | 77       | PositionEffect                 | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell. |



| 39          | OrdStatus             | Υ | Order Status after applying the transaction that is being communicated:  O = New 1 = Partially Filled 2 = Filled 4 = Cancelled C = Expired           |
|-------------|-----------------------|---|--|
| 150         | ЕхесТуре              | Υ | Execution Type that indicates the reason for the generation of the Execution Report:  H = Trade Cancel   |
| 31          | LastPx                | N | Execution Price Will be set to 0   |
| 32          | LastQty               | N | Execution Size Will be set to 0  |
| 14          | CumQty                | Υ | Cumulative execution size  |
| 151         | LeavesQty             | Υ | Open order quantity  |
| 1115        | OrderCategory         | N | Defines the type of interest behind a trade  • A = Internal Cross Order  Absence of this field means the trade is not concluded within the same firm |
| 58          | Text                  | N | Free Text  |
| 378         | ExecRestatementReason | N | Code to identify the reason for an Execution Report message with Exec Type= H (Trade Cancel):  8 = Market (exchange) option                          |
| Message Tra | <u>iler</u>           |   |  |

# 7.7.8 Cancel Reject (9)

The OCG-C sends this message when a Cancel Order (35=F) or Cancel/Replace Order (35=G) request is rejected.

| FIX           | X Tag    | Field Name               | Required? | Description  |
|---------------|----------|--------------------------|-----------|--|
| Mes           | sage He  | ader_                    |           |  |
|               | 35       | MsgType                  | Υ         | 9 = Cancel Reject  |
| Mes           | sage Bo  | dy                       |           |  |
|               | 11       | ClOrdID                  | Υ         | Client identifier as specified in the Cancel or Cancel/Replace request.  |
|               | 41       | OrigClOrdID              | N         | Original Client specified identifier of the order.                       |
|               | 37       | OrderID                  | Υ         | Order ID as assigned by the exchange.                                    |
| Com           | ponent B | lock <parties></parties> |           |  |
| 4             | 453      | NoPartyIDs               | Υ         | Number of party identifiers. The value in this field can be 1 or 2 or 3. |
| $\rightarrow$ | 448      | PartyID                  | Υ         | ID of the Broker client submitting the order: Broker ID/BS User ID.      |



| $\rightarrow$ | 447       | PartyldSource    | Υ | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |
|---------------|-----------|------------------|---|---|
| <b>→</b>      | 452       | PartyRole        | Y | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that is receiving this cancel)</li> <li>36 = Entering Trader (Broker ID that is submitting the OBO Cancel Request).</li> <li>Applicable only if this Cancel Reject is due to an OBO Cancel Request.</li> <li>75 = Location ID (BS User ID)</li> </ul>  |
| End           | Compone   | ent Block        |   |   |
|               | 60        | TransactTime     | Υ | The time at which the particular message was generated  |
|               | 39        | OrdStatus        | Y | Order status as at the time of this rejection:  O = New 1 = Partially Filled 2 = Filled 4 = Cancelled 8 = Rejected C = Expired 6 = Pending Cancel A = Pending New E = Pending Replace OrdStatus will be set to 8 = Rejected if: Cancel Reject is due to an Order Cancel Request but it's an unknown order Cancel Reject is due to an Order Cancel/Replace Request but it's an unknown order Cancel/Replace Request but it's an unknown order Cancel Reject is due to a validation failure for an OBO Cancel Request |
|               | 434       | CxlRejResponseTo | Υ | Indicates whether the message is being generated as an amend reject or a cancel reject:  1 = Order Cancel Request 2 = Order Cancel/Replace Request  |
|               | 102       | CxlRejReason     | N | Reject code indicating the reason for the order reject:  O = Too late to cancel  1 = Unknown order  3 = Order already in Pending Cancel or Pending Replace status  6 = Duplicate ClOrdID (11) received  8 = Price exceeds current price band  99 = Other (default)  100 = Reference price is not available  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band  103 = Notional value exceeds threshold   |
|               | 58        | Text             | N | Free Text   |
|               | 1328      | RejectText       | N | Textual description of the rejection that is being communicated through this execution report   |
| Me            | ssage Tra | <u>iller</u>     |   |   |
|               |           |                  |   |   |



# 7.7.9 Order Mass Cancel Report (r)

The OCG-C sends this message in response to an Order Mass Cancel Request message.

| Mess:         | sage Heads 35 sage Boo 11 369 530 conent Bl | MsgType  dy  ClOrdID  MassActionReportID  MassCancelRequestType                  | Y<br>N<br>Y | r = Order Mass Cancel Report  Client specified identifier of the mass cancel request.  Unique identifier assigned for the Order Mass Cancel Report by the system  Specifies the scope of the mass cancel request as in the incoming request:  1 = Cancel orders for a Security 7 = Cancel all orders 9 = Cancel orders for a Market Segment |
|---------------|---|--|-------------|---|
| Mess  13  5   | sage Boo<br>11<br>369<br>530                | dy  ClOrdID  MassActionReportID  MassCancelRequestType  lock <parties></parties> | N<br>Y      | Client specified identifier of the mass cancel request.  Unique identifier assigned for the Order Mass Cancel Report by the system  Specifies the scope of the mass cancel request as in the incoming request:  1 = Cancel orders for a Security 7 = Cancel all orders  |
| 1:<br>5       | 369<br>330<br>Doonent Bl                    | CIOrdID  MassActionReportID  MassCancelRequestType  lock <parties></parties>     | Υ           | request.  Unique identifier assigned for the Order Mass Cancel Report by the system  Specifies the scope of the mass cancel request as in the incoming request:  1 = Cancel orders for a Security 7 = Cancel all orders   |
| 1:<br>5       | 369<br>530<br>Donent Bl                     | MassActionReportID  MassCancelRequestType  lock <parties></parties>              | Υ           | request.  Unique identifier assigned for the Order Mass Cancel Report by the system  Specifies the scope of the mass cancel request as in the incoming request:  1 = Cancel orders for a Security 7 = Cancel all orders   |
| 5<br>Comp     | 530<br>Donent Bl                            | MassCancelRequestType  lock <parties></parties>                                  |             | Cancel Report by the system  Specifies the scope of the mass cancel request as in the incoming request:  1 = Cancel orders for a Security 7 = Cancel all orders   |
| Comp          | oonent Bl                                   | lock <parties></parties>   | Y           | <ul> <li>the incoming request:</li> <li>1 = Cancel orders for a Security</li> <li>7 = Cancel all orders</li> </ul>  |
|               |   |  |             |   |
| 4             | 153   |  |             |   |
|               |   | NoPartyIDs   | Υ           | Number of party identifiers. The value in this field can be 1 or 2 or 3.  |
| $\rightarrow$ | 448   | PartyID  | Y           | ID of the Broker client submitting the order mass cancel request – Broker ID or BS User ID.  Orders for the Broker ID specified here will be cancelled.   |
| $\rightarrow$ | 447   | PartyldSource  | Y           | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |
| →             | 452   | PartyRole  | Υ           | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID for which orders were requested to be mass cancelled  36 = Entering Trader (Broker ID that is submitting the OBO mass cancel request) Applicable only if this Order Mass Cancel Report is due to an OBO Mass Cancel Request)  75 = Location ID (BS User ID)             |
| End C         | Compone                                     | nt Block   |             |   |
| Comp          | onent Bl                                    | lock <instrument></instrument>   |             |   |
|               | 48  | SecurityID   | N           | Instrument identifier   |
| 22            |   | SecurityIDSource   | N           | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |
| 207           |   | SecurityExchange   | N           | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |



| 531         | MassCancelResponse     | Y | <ul> <li>Indicates the action taken on the cancel request:</li> <li>0 = Cancel request rejected</li> <li>1 = Cancel orders for a security</li> <li>7 = Cancel all orders</li> <li>9 = Cancel orders for a market segment</li> </ul> |
|-------------|------------------------|---|---|
| 532         | MassCancelRejectReason | N | The code Indicating the reason why the Mass Cancel Request was rejected:  8 = Invalid or Unknown Market Segment(8)  99 = Other  Required if:  Mass Cancel Response = Cancel Request Rejected  |
| 60          | TransactTime           | Υ | The time at which the particular message was generated.   |
| 58          | Text                   | N | Textual description of the transaction (mass cancel request rejected) that is being communicated through the order mass cancel report.  May be present only if:  Mass Cancel Response = Cancel Request Rejected                     |
| Message Tra | <u>niler</u>           |   |   |

# 7.8 Business Messages - Quote Handling

# 7.8.1 Quote (S)

This message is initiated by the client to send a new quote or to amend an existing quote.

| FI            | X Tag    | Field Name               | Required? | Description  |
|---------------|----------|--------------------------|-----------|--|
| Mes           | ssage He | <u>ader</u>              |           |  |
|               | 35       | MsgType                  | Υ         | S = Quote  |
| Mes           | ssage Bo | dy                       |           |  |
|               | 390      | BidID                    | Υ         | Client specified identifier for the Bid side of the quote.                                       |
| É             | 1867     | OfferID                  | Υ         | Client specified identifier for the Offer side of the quote.                                     |
|               | 537      | QuoteType                | N         | Indicates the type of Quote. Must be:  1 = Tradable  |
| Com           | ponent B | lock <parties></parties> |           |  |
|               | 453      | NoPartyIDs               | Υ         | Number of party identifiers. The value in this field should be $\frac{1 - or 2}{3}$ .            |
| $\rightarrow$ | 448      | PartyID                  | Υ         | ID of the Broker client submitting the order: Broker Number/BS User ID/BCAN Field                |
| $\rightarrow$ | 447      | PartyldSource            | Υ         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code |



| $\rightarrow$ | 452                 | PartyRole                            | Υ | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID submitting this Quote) - mandatory  3 = Client ID (BCAN Field) - mandatory  To = Location ID (BS User ID)  |  |  |  |  |
|---------------|---------------------|--------------------------------------|---|--|--|--|--|--|
| End           | End Component Block |                                      |   |  |  |  |  |  |
| Com           | ponent B            | lock <instrument></instrument>       |   |  |  |  |  |  |
|               | 48                  | SecurityID                           | Υ | Instrument identifier  |  |  |  |  |
|               | 22                  | SecurityIDSource                     | N | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |  |  |  |  |
|               | 207                 | SecurityExchange                     | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |  |  |  |  |
| End           | Compone             | ent Block                            |   |  |  |  |  |  |
|               | 58                  | Text                                 | N | Free Text  |  |  |  |  |
|               | 54                  | Side                                 | N | Side of the order ■ 5 = Sell Short   |  |  |  |  |
|               | 77                  | PositionEffect                       | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close  Use this for indicating that the Bid side of this Quote is covering a short selling.   |  |  |  |  |
|               | 134                 | BidSize                              | N | Quantity of Bid side   |  |  |  |  |
|               | 135                 | OfferSize                            | N | Quantity of Offer side   |  |  |  |  |
|               | 132                 | BidPx                                | N | Bid Price  |  |  |  |  |
|               | 133                 | OfferPx                              | N | Offer Price  |  |  |  |  |
|               | 60                  | TransactTime                         | Υ | The time at which the particular message was generated.  |  |  |  |  |
|               | 529                 | OrderRestrictions                    | N | Restrictions associated with this order:  2 = Index Arbitrage  5 = Acting as Market Maker or Specialist in Security  6 = Acting as Market Maker or Specialist in underlying of a derivative security  The above 3 values are applicable only if Side (54) = 5 (Sell Short) |  |  |  |  |
| Com           | ponent B            | lock <valuecheckgrp></valuecheckgrp> |   |  |  |  |  |  |
|               | 1868                | NoValueChecks                        | N | Number of entries in this group.  If 0 or absence of this component group will result in system performing both Price and Notional Value checks.   |  |  |  |  |



| $\rightarrow$ | 1869                | ValueCheckType   | N | Type of value to be checked:  1 = Price Check 2 = Notional Value Check  Required if: NoValueChecks (1868) > 0  Absence of a particular ValueCheckType will force the system to perform that specific check.         |  |  |
|---------------|---------------------|------------------|---|---|--|--|
| <b>→</b>      | 1870                | ValueCheckAction | N | Identifies if the type of value specified in the ValueCheckType is required or not:  O = Do not check  1 = Check  Any other than above will assume both checks as required.  Required if:  NoValueChecks (1868) > 0 |  |  |
| End           | End Component Block |                  |   |   |  |  |
| Me            | Message Trailer     |                  |   |   |  |  |

# 7.8.2 Quote Cancel (Z)

This message is initiated by the client to cancel an existing Quote.

| FI            | X Tag          | Field Name                                   | Required? | Description  |  |  |  |
|---------------|----------------|--|-----------|--|--|--|--|
| Mes           | Message Header |  |           |  |  |  |  |
|               | 35             | MsgType                                      | Υ         | Z = Quote Cancel   |  |  |  |
| Mes           | ssage Bo       | dy   |           |  |  |  |  |
| 3             | 1166           | QuoteMsgID                                   | Υ         | Client specified identifier for the Quote Cancel message.  |  |  |  |
|               | 298            | QuoteCancelType                              | Υ         | Identifies type of quote cancel:  1 = Cancel for one or more securities  |  |  |  |
| Com           | ponent B       | lock <parties></parties>                     |           |  |  |  |  |
|               | 453            | NoPartyIDs                                   | Υ         | Number of party identifiers. The value in this field should be 1 or 2.   |  |  |  |
| $\rightarrow$ | 448            | PartyID                                      | Υ         | ID of the Broker client submitting the order:<br>Broker Number/BS User ID  |  |  |  |
| $\rightarrow$ | 447            | PartyldSource                                | Y         | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |  |  |  |
| <b>→</b>      | 452            | PartyRole                                    | Υ         | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that submitted the Quote)</li> <li>75 = Location ID (BS User ID)</li> </ul> |  |  |  |
| End           | Compone        | nt Block                                     |           |  |  |  |  |
| Com           | ponent B       | lock <quotcxlentriesgrp></quotcxlentriesgrp> |           |  |  |  |  |



| 295           | NoQuoteEntries        |                                       | N | The number of securities (instruments) whose quotes are to be cancelled.  If present, must be set to 1.  Required if the QuoteCancelType (298) = '1' (Cancel for one or more securities). |  |
|---------------|-----------------------|---------------------------------------|---|---|--|
| $\rightarrow$ | Comp                  | onent Block <instrument></instrument> |   |   |  |
| $\rightarrow$ | 48                    | SecurityID                            | N | Instrument identifier  Required if the QuoteCancelType (298) = '1' (Cancel for one or more securities)  |  |
| <b>→</b>      | 22                    | SecurityIDSource                      | N | Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified   |  |
| →             | 207                   | SecurityExchange                      | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |  |
| $\rightarrow$ | → End Component Block |                                       |   |   |  |
| End C         | End Component Block   |                                       |   |   |  |
| Mess          | Message Trailer       |                                       |   |   |  |

# 7.8.3 Quote Status Report (AI)

The OCG-C sends this message if a Quote or Quote Cancel message is rejected.

| FIX Tag     | Field Name                          | Required? | Description   |  |  |  |
|-------------|-------------------------------------|-----------|---|--|--|--|
| Message He  | <u>ader</u>                         |           |   |  |  |  |
| 35          | MsgType                             | Υ         | AI = Quote Status Report  |  |  |  |
| Message Bo  | Message Body                        |           |   |  |  |  |
| 1166        | QuoteMsgID                          | N         | Client specified identifier for the Quote Cancel message.  Required to be present only if the Quote Status Report is in response to a Quote Cancel message.   |  |  |  |
| 390         | BidID                               | N         |   |  |  |  |
| 390         | biuiu                               | IN        | Client specified identifier for Bid side of the Quote.  Required to be present only if the Quote Status  Report is in response to a Quote message.  |  |  |  |
| 1867        | OfferID                             | N         | Client specified identifier for Offer side of the Quote.  Required to be present only if the Quote Status Report is in response to a Quote message.   |  |  |  |
| 537         | QuoteType                           | N         | Indicates the type of Quote:  ■ 1 = Tradable  |  |  |  |
| Component B | Component Block <parties></parties> |           |   |  |  |  |
| 453         | NoPartyIDs                          | Y         | Number of party identifiers. The value in this field can be 1 or 2. $ \label{eq:can} % \begin{center} c$ |  |  |  |



| → 448       PartyID       Y       ID of the Broker client submitting the order: Broker Number/BS User ID         → 447       PartyIdSource       Y       Defines the naming convention used in specifying the PartyID (448):   |               |           |                                |   |   |
|--|---------------|-----------|--------------------------------|---|---|
| the PartyID (448):  D = Proprietary/Custom Code  does not be specified PartyID (448):  1 = Executing Firm (Broker ID that submitted the Quote/Quote Cancel message)  7   | $\rightarrow$ | 448       | PartyID                        | Υ | _   |
| →       452       PartyRole       Y       Role of the specified PartyID (448): <ul> <li>1 = Executing Firm (Broker ID that submitted the Quote/Quote Cancel message)</li> <li>75 = Location ID (BS User ID)</li> </ul> End Component Block         Component Block        N       Instrument identifier         48       SecurityID       N       Instrument identifier         22       SecurityIDSource       N       Identifies the source of the SecurityID (48): <ul> <li>8 = Exchange Symbol</li> <li>Required If:</li></ul>   | $\rightarrow$ | 447       | PartyldSource                  | Υ | the PartyID (448):  |
| End Component Block  Component Block < Instrument>  48   | <b>→</b>      | 452       | PartyRole                      | Υ | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that submitted  |
| Component Block <instrument>  48</instrument>  |               |           |                                |   | - · · · · · · · · · · · · · · · · · · ·   |
| 48 SecurityID  N Instrument identifier  22 SecurityIDSource  N Identifies the source of the SecurityID (48):  • 8 = Exchange Symbol Required if:   | End           | Compone   | ent Block                      |   |   |
| SecurityIDSource  N Identifies the source of the SecurityID (48):  ** 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange  N The market which is used to identify the security: ** XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  End Component Block  60 TransactTime  Y The time at which the particular message was generated.  297 QuoteStatus  N Identifies the status of the quote acknowledgement: ** 5 = Rejected  298 QuoteCancelType  N Identifies type of quote cancel: ** 1 = Cancel for one or more securities  1328 RejectText  N Reason for rejection  300 QuoteRejectReason  N The code indicating the reason why the quote got rejected  ** 8 = Invalid Price ** 10 = Price exceeds current price band ** 14 = Notional value exceeds threshold ** 16 = Reference Price is not available ** 99 = Other ** 101 = Price exceeds current price band (override not allowed)  ** 102 = Price exceeds current price band | Com           | ponent B  | lock <instrument></instrument> |   |   |
| 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange  N The market which is used to identify the security:     XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  End Component Block  60 TransactTime  Y The time at which the particular message was generated.  297 QuoteStatus  N Identifies the status of the quote acknowledgement:     5 = Rejected  298 QuoteCancelType  N Identifies type of quote cancel:     1 = Cancel for one or more securities  1328 RejectText  N Reason for rejection  300 QuoteRejectReason  N The code indicating the reason why the quote got rejected     8 = Invalid Price     10 = Price exceeds current price band     14 = Notional value exceeds threshold     16 = Reference Price is not available     99 = Other     101 = Price exceeds current price band     (override not allowed)     102 = Price exceeds current price band   |               | 48        | SecurityID                     | N | Instrument identifier   |
|  |               | 22        | SecurityIDSource               | N | ■ 8 = Exchange Symbol Required if:  |
| TransactTime  Y The time at which the particular message was generated.  Description  QuoteStatus  N Identifies the status of the quote acknowledgement:  5 = Rejected  QuoteCancelType  N Identifies type of quote cancel:  1 = Cancel for one or more securities  N Reason for rejection  QuoteRejectReason  N The code indicating the reason why the quote got rejected  8 = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceeds threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band  (override not allowed)  102 = Price exceeds current price band   |               | 207       | SecurityExchange               | N | ■ XHKG Required if:   |
| generated.  297 QuoteStatus  N Identifies the status of the quote acknowledgement:  5 = Rejected  298 QuoteCancelType  N Identifies type of quote cancel:  1 = Cancel for one or more securities  1328 RejectText  N Reason for rejection  N The code indicating the reason why the quote got rejected  8 = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceeds threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band  | End           | Compone   | ent Block                      |   |   |
| acknowledgement:   |               | 60        | TransactTime                   | Υ |   |
| I = Cancel for one or more securities  N Reason for rejection  OuoteRejectReason  N The code indicating the reason why the quote got rejected  S = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceeds threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band  (override not allowed)  102 = Price exceeds current price band  |               | 297       | QuoteStatus                    | N | acknowledgement:  |
| QuoteRejectReason  N The code indicating the reason why the quote got rejected  8 = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceeds threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band  |               | 298       | QuoteCancelType                | N |   |
| rejected  8 = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceeds threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band  | 1             | 1328      | RejectText                     | N | Reason for rejection  |
| Message Trailer  |               | 300       | QuoteRejectReason              | N | rejected  8 = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceeds threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band (override not allowed) |
|  | Mes           | ssage Tra | <u>iller</u>                   |   |   |



#### 7.9 Business Messages - Trade Handling

This set of messages used for reporting an off-exchange trade follows "Privately Negotiated Trade, Two-Party Report" – reference: FIX 5.0 SP2 Volume 5.

According to the business processing flow:

- For all types of off-exchange trades except "Overseas", the selling counterparty has the responsibility to report the resultant trade. Purchasing counterparties are able to review the trades reported by sellers, and can reject any alleged trades if they are believed to be incorrect. If the alleged trade is correct, purchasing side needs to submit the BCAN Field of purchase side to Exchange via Trade Capture Report message.
- Purchases can be input for off-exchange trades of type "Overseas" (i.e., one party to the trade is not a member of HKEX). Overseas trades are not reported with a correspondent/counterparty Broker ID and they cannot therefore be rejected

The same set of messages is also used for reporting an odd lot/special lot trade in semiautomatic trading. Such a trade can be requested to be reported to the market by either buyer or seller by providing details of the resting odd lot/special lot order.

#### 7.9.1 Trade Capture Report - Off Exchange Trade

#### 7.9.1.1 New (AE)

The client sends this message to report an off-exchange trade.

| FIX Tag         | Field Name                            | Required? | Description  |
|-----------------|---------------------------------------|-----------|--|
| Message Heade   | <u>r</u>                              |           |  |
| 35              | MsgType                               | Υ         | AE = Trade Capture Report  |
| Message Body    |                                       |           |  |
| 571             | TradeReportID                         | Υ         | Client specified unique identifier of the trade capture report.  |
| 487             | TradeReportTransType                  | N         | Identifies the trade report message transaction type:  • 0 = New   |
| 856             | TradeReportType                       | Υ         | Type of the Trade Report:  ■ 0 = Submit  |
| 828             | TrdType                               | Y         | Type of the trade being reported:  4 = Late Trade  22 = Privately Negotiated Trade  102 = Odd Lot Trade  104 = Overseas Trade            |
| 1123            | TradeHandlingInstr                    | N         | Indicates how the trade capture report should be handled by the receiver:  1 = Two Party Report  6 = One Party Report (if TrdType = 104) |
| 31              | LastPx                                | Υ         | Execution Price  |
| 32              | LastQty                               | Υ         | Execution Size   |
| 60              | TransactTime                          | Υ         | The time at which the particular message was generated.  |
| Component Block | <trdcaprptsidegrp></trdcaprptsidegrp> |           |  |



|               | 552           |       | NoSides                   | Y | Number of sides:  1 = Overseas or internalized  2 = Default  Note  For internalized trade  As BCAN Field is optional for manual trade with LastQty < 1 board lot, NoSides can be 1 (if BCAN Field is not provided) or 2 (if BCAN Field for both sides are provided).  |
|---------------|---------------|-------|---------------------------|---|---|
| $\rightarrow$ | 5             | 54    | Side                      | Y | Side of the trade  1 = Buy 2 = Sell 5 = Sell Short  |
| $\rightarrow$ | Comp          | onent | Block <parties></parties> |   |   |
| $\rightarrow$ | 4:            | 53    | NoPartyIDs                | Υ | <ul> <li>Number of party identifiers:</li> <li>For submitting side group, this value can be 1 or 2 or 3.</li> <li>For the counterparty, this value should be 1</li> </ul>   |
| <b>→</b>      | <b>→</b>      | 448   | PartyID                   | Y | Broker ID/Counterparty Broker ID/BS User ID/BCAN Field.  Only the PartyIDs for the submitter should be present in the side group applicable to the submitter of the Trade Report (i.e. PartyIDs applicable to PartyRoles 1, 3 and 75).  Only the PartyID of the counterparty should be present in the side group applicable to the contra party of the trade Report (i.e. PartyID applicable to PartyRole 3, 17). |
| $\rightarrow$ | $\rightarrow$ | 447   | PartyldSource             | Y | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  |



| <b>→</b>      | → 452     | PartyRole   | Y   | Role of the specified PartyID (448):  For the submitting side group:  1 = Executing Firm (Broker ID that is submitting this Trade Capture Report) - mandatory  3 = Client ID (BCAN Field) of submitting side - mandatory for manual trade with LastQty >= 1 board lot  75 = Location ID (BS User ID)  For the counterparty side group:  3 = Client ID (BCAN Field) - mandatory and applicable for buyer side of internalized manual trade with LastQty >= 1 board lot  17 = Contra Firm (Counterparty Broker ID for this trade)  For any TrdType, there must be one Broker ID with PartyRole = 1.  Counterparty Broker ID (PartyRole=17) is NOT required only if:  TradeHandlingInstr (1123) is 1 (Two party report) and OrderCategory (1115) is A  OR  TradeHandlingInstr (1123) is 6 (One party report)  Location ID (PartyRole = 75) may be provided optionally for any TrdType. |
|---------------|-----------|---|-----|---|
| $\rightarrow$ | End Compo | onent Block   |     |   |
| $\rightarrow$ | Componen  | t Block <clrinstgrp></clrinstgrp>   |     |   |
| $\rightarrow$ | 576       | NoClearingInstructions  | N   | Number of clearing instructions. Always set to 1.   |
| $\rightarrow$ | → 577     | ClearingInstruction   | N   | Eligibility of this trade for clearing and central counterparty processing:  0 = Process normally  1 = Exclude from all netting  14 = Buy-In  |
| $\rightarrow$ | End Compo | onent Block   |     |   |
| $\rightarrow$ | Componen  | t Block <tradereportorderdeta< th=""><th>il&gt;</th><th></th></tradereportorderdeta<> | il> |   |
| <b>→</b>      | 18        | ExecInst  | N   | <ul> <li>Instructions for trade report handling:</li> <li>c (lower case C) = Ignore Price Validity Checks</li> <li>x (lower case X) = Ignore Notional Value Checks</li> <li>If either is missing, the respective check will be performed:</li> <li>Absence of this field is interpreted as None (i.e. system will perform both Price and Notional Value check).</li> </ul>  |



| <b>→</b>      | 528             | OrderCapacity             | N | Designates the capacity of the firm reporting this trade:  • A = Agency • P = Principal   |  |  |  |
|---------------|-----------------|---------------------------|---|---|--|--|--|
| $\rightarrow$ | End Compon      | ent Block                 |   |   |  |  |  |
| <b>→</b>      | 77              | PositionEffect            | N | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell. |  |  |  |
| $\rightarrow$ | 58              | Text                      | N | Free Text   |  |  |  |
| <b>→</b>      | 1115            | OrderCategory             | N | Defines the type of interest behind a trade  A = Internal Cross Order  Absence of this field means the trade is not concluded within the same firm  |  |  |  |
| End           | Component B     | lock                      |   |   |  |  |  |
| Com           | ponent Block    | <instrument></instrument> |   |   |  |  |  |
|               | 48              | SecurityID                | Υ | Instrument identifier   |  |  |  |
|               | 22              | SecurityIDSource          | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |  |  |  |
|               | 207             | SecurityExchange          | N | The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |  |  |  |
| End           | Component B     | lock                      |   |   |  |  |  |
| Me            | Message Trailer |                           |   |   |  |  |  |

# 7.9.1.2 Cancel (AE)

The client sends this message to cancel a reported trade.

| FIX Tag       | Field Name     | Required? | Description   |  |  |  |  |
|---------------|----------------|-----------|---|--|--|--|--|
| Message Heade | Message Header |           |   |  |  |  |  |
| 35            | MsgType        | Υ         | AE = Trade Capture Report                                       |  |  |  |  |
| Message Body  |                |           |   |  |  |  |  |
| 571           | TradeReportID  | Υ         | Client specified unique identifier of the trade capture report. |  |  |  |  |
| 1003          | TradeID        | Υ         | Unique ID as assigned to the trade by the exchange.             |  |  |  |  |



| ## A87  | transaction type:  10 - New  1123 TradeReportType  Y Type of the Trade Report:  6 - Trade Report Cancel  1123 TradeHandlingInstr  N Indicates how the trade capture report should be handled by the receiver:  1 - Two Party Report  31 LastPx  Y Execution Price  32 LastQty  Y Execution Size  60 TransactTime  Y The time at which the particular message was generated.  Component Block <trdcaprptsidegrp>  552 NoSides  Y Number of sides:  1 -  54 Side  Y Side of the trade  1 = Buy  Component Block <parties>  A453 NoPartyIDs  Y Side of the trade  1 = Buy  PartyID  Y Broker ID requesting for this cancel/BS User ID.  A47 PartyIdSource  Y Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  A52 PartyRole  Y Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade)  7 To = Location ID (8S User ID)  End Component Block  Component Block <instrument>  48 SecurityID  Y Instrument identifier  207 SecurityExchange  N The market which is used to identify the security.  **SecurityID (48) is specified  The market which is used to identify the security.  **SecurityID Source (22) = 8 (Exchange</instrument></parties></trdcaprptsidegrp> |               |               |         |                                       |   |  |  |  |
|---|---|---------------|---------------|---------|---------------------------------------|---|--|--|--|
| • 6 = Trade Report Cancel   | 1123   TradeHandlingInstr   N   Indicates how the trade capture report should be handled by the receiver:   1 = Two Party Report  |               | 487           |         | TradeReportTransType                  | N | transaction type:  |  |  |
| be handled by the receiver:  1 = Two Party Report  31   | be handled by the receiver:  1 = Two Party Report  31   |               | 856           |         | TradeReportType                       | Υ |  |  |  |
| 32 LastQty Y Execution Size 60 TransactTime Y The time at which the particular message was generated.  Component Block <trdcaprptsidegrp>  552 NoSides Y Number of sides: • 1  → 54 Side Y Side of the trade • 1 = Buy  → Component Block <parties>  → 453 NoPartylDs Y Number of party identifiers. The value in this field should be 1 or 2.  → 3 448 PartylD Y Broker ID requesting for this cancel/BS User ID.  → 447 PartyldSource Y Defines the naming convention used in specifying the PartylD (448): • D = Proprietary/Custom Code  → 3 452 PartyRole Y Role of the specified PartylD (448): • 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade) • 75 = Location ID (BS User ID)  → End Component Block  Component Block <instrument>  48 SecurityID Y Instrument identifier  20 SecurityExchange N Instrument identifier SecurityID (448): • 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange N The market which is used to identify the security: • XHKG Required if: SecurityIDSource (22) = 8 (Exchange</instrument></parties></trdcaprptsidegrp>  | 32 LastQty Y Execution Size  60 TransactTime Y The time at which the particular message was generated.  Component Block <trdcaprptsidegrp>  552 NoSides Y Number of sides:</trdcaprptsidegrp>   |               | 1123          |         | TradeHandlingInstr                    | N | be handled by the receiver:  |  |  |
| 60 TransactTime Y The time at which the particular message was generated.  Component Block <trdcaprptsidegrp>  552 NoSides Y Number of sides: 1 1  3 54 Side Y Side of the trade 1 1 = Buy  3 Component Block <parties> 3 453 NoPartyIDs Y Number of party identifiers. The value in this field should be 1 or 2. 3 448 PartyID Y Broker ID requesting for this cancel/BS User ID. 3 447 PartyIdSource Y Defines the naming convention used in specifying the PartyID (448): 1 D = Proprietary/Custom Code  3 452 PartyRole Y Role of the specified PartyID (448): 1 Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade) 7 To = Location ID (BS User ID)  3 End Component Block  Component Block <instrument> 48 SecurityID 1 Instrument identifier 22 SecurityIDSource Y Identifies the source of the SecurityID (48): 8 = Exchange Symbol Required if: SecurityID (48) is specified 207 SecurityExchange N The market which is used to identify the security: 8 XHKG 8 Required if: 9 SecurityIDSource (22) = 8 (Exchange</instrument></parties></trdcaprptsidegrp>  | Component Block <trdcaprptsidegrp>  552 NoSides Y Number of sides:</trdcaprptsidegrp>   |               | 31            |         | LastPx                                | Υ | Execution Price  |  |  |
| generated.  | generated.   Component Block <trdcaprptsidegrp>   552</trdcaprptsidegrp>  |               | 32            |         | LastQty                               | Υ | Execution Size   |  |  |
| Side   Y  | S52   NoSides   Y   Number of sides:   1  |               | 60            |         | TransactTime                          | Y |  |  |  |
| • 1  → 54 Side  Y Side of the trade • 1 = Buy  → Component Block <parties>  → 453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2.  → → 448 PartyID  Y Broker ID requesting for this cancel/BS User ID.  → → 447 PartyIdSource  Y Defines the naming convention used in specifying the PartyID (448): • D = Proprietary/Custom Code  → → 452 PartyRole  Y Role of the specified PartyID (448): • 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade) • 75 = Location ID (BS User ID)  → End Component Block  Component Block <instrument>  48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48): • 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange  N The market which is used to identify the security: • XHKG Required if: SecurityIDSource (22) = 8 (Exchange</instrument></parties>   | 1   Side of the trade   1 = Buy   | Com           | poner         | t Block | <trdcaprptsidegrp></trdcaprptsidegrp> |   |  |  |  |
| ■ 1 = Buy  Component Block <parties>  453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2.  At 458 PartyID  Y Broker ID requesting for this cancel/BS User ID.  At 47 PartyIdSource  Y Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code  At 52 PartyRole  Y Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade)  To 5 = Location ID (BS User ID)  End Component Block  Component Block <instrument>  48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange  N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange)</instrument></parties>  | ■ 1 = Buy  → Component Block <parties>  → 453 NoPartyIDs Y Number of party identifiers. The value in this field should be 1 or 2.  → → 448 PartyID Y Broker ID requesting for this cancel/BS User ID.  → → 447 PartyIdSource Y Defines the naming convention used in specifying the PartyID (448): ■ D = Proprietary/Custom Code  → → 452 PartyRole Y Role of the specified PartyID (448): ■ 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade) ■ 75 = Location ID (BS User ID)  → End Component Block  End Component Block <instrument>  48 SecurityID Y Instrument identifier  22 SecurityIDSource Y Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange N The market which is used to identify the security: ■ XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).</instrument></parties>   |               | 552           |         | NoSides                               | Υ |  |  |  |
| →       453       NoPartyIDs       Y       Number of party identifiers. The value in this field should be 1 or 2.         →       →       448       PartyID       Y       Broker ID requesting for this cancel/BS User ID.         →       →       447       PartyIdSource       Y       Defines the naming convention used in specifying the PartyID (448):             ■         →       →       452       PartyRole       Y       Role of the specified PartyID (448):             ■         →       →       452       PartyRole       Y       Role of the specified PartyID (448):             ■       ■       1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade)       ■       75 = Location ID (BS User ID)       →       75 = Location ID (BS User ID)       →       75 = Location ID (BS User ID)       →       Y       Instrument identifier       ■       N       Instrument identifier       ■       N       N       N       N       N       N       The market which is used to identify the security:             ■       N       N       The market which is used to identify the security:             ■       N       N       N       The market which is used to identify the security:             ■       N       N       N       The Market which is used to identify the security:             ■       N       N | →       453       NoPartyIDs       Y       Number of party identifiers. The value in this field should be 1 or 2.         →       →       448       PartyID       Y       Broker ID requesting for this cancel/BS User ID.         →       →       447       PartyIdSource       Y       Defines the naming convention used in specifying the PartyID (448):  | $\rightarrow$ | Ţ             | 54      | Side                                  | Υ |  |  |  |
| field should be 1 or 2.  → → 448 PartyID  | field should be 1 or 2.  → → 448 PartyID  Y Broker ID requesting for this cancel/BS User ID.  → → 447 PartyIdSource  Y Defines the naming convention used in specifying the PartyID (448):  • D = Proprietary/Custom Code  → → 452 PartyRole  Y Role of the specified PartyID (448):  • 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade)  • 75 = Location ID (BS User ID)  → End Component Block  Component Block <instrument>  48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  • 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange  N The market which is used to identify the security:  • XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).</instrument>  | $\rightarrow$ | Com           | ponent  | Block <parties></parties>             |   |  |  |  |
| 3   | 3   | $\rightarrow$ | 4             | 53      | NoPartyIDs                            | Υ |  |  |  |
| specifying the PartyID (448):  □ D = Proprietary/Custom Code  → → 452 PartyRole  Y Role of the specified PartyID (448):  □ 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade)  □ 75 = Location ID (BS User ID)  → End Component Block  End Component Block  Component Block <instrument>  48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  □ 8 = Exchange Symbol Required if:  SecurityID (48) is specified  N The market which is used to identify the security:  □ XHKG Required if: SecurityIDSource (22) = 8 (Exchange</instrument>  | specifying the PartyID (448):  □ D = Proprietary/Custom Code  → → 452 PartyRole  Y Role of the specified PartyID (448):  □ 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade)  □ 75 = Location ID (BS User ID)  → End Component Block  End Component Block <instrument>  48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  □ 8 = Exchange Symbol Required if:  SecurityID (48) is specified  207 SecurityExchange  N The market which is used to identify the security:  □ XHKG Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).</instrument>   | $\rightarrow$ | $\rightarrow$ | 448     | PartyID                               | Y |  |  |  |
| ■ 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade) ■ 75 = Location ID (BS User ID)  → End Component Block  End Component Block  Component Block <instrument>  48 SecurityID Y Instrument identifier  22 SecurityIDSource Y Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange N The market which is used to identify the security: ■ XHKG Required if: SecurityIDSource (22) = 8 (Exchange</instrument>  | ■ 1 = Executing Firm (Broker ID that submitted this Trade Capture Report to cancel the reported trade) ■ 75 = Location ID (BS User ID)  → End Component Block  End Component Block  Component Block <instrument>  48 SecurityID Y Instrument identifier  22 SecurityIDSource Y Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange N The market which is used to identify the security: ■ XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).</instrument>   | $\rightarrow$ | $\rightarrow$ | 447     | PartyldSource                         | Υ | specifying the PartyID (448):  |  |  |
| End Component Block  Component Block <instrument>  48</instrument>  | End Component Block  Component Block <instrument>  48</instrument>  | $\rightarrow$ | <b>→</b>      | 452     | PartyRole                             | Y | <ul> <li>1 = Executing Firm (Broker ID that<br/>submitted this Trade Capture Report to<br/>cancel the reported trade)</li> </ul> |  |  |
| Component Block <instrument>  48</instrument>   | Component Block <instrument>  48</instrument>   | $\rightarrow$ | End (         | Compon  | ent Block                             |   |  |  |  |
| 48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange)   | 48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   | End           | Comp          | onent B | lock                                  |   |  |  |  |
| 22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange)   | 22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   | Com           | poner         | t Block | <instrument></instrument>             |   |  |  |  |
| <ul> <li>8 = Exchange Symbol Required if:         SecurityID (48) is specified</li> <li>207 SecurityExchange</li> <li>N The market which is used to identify the security:         <ul> <li>XHKG</li> <li>Required if:</li></ul></li></ul>  | <ul> <li>8 = Exchange Symbol Required if:         SecurityID (48) is specified</li> <li>207 SecurityExchange</li> <li>N The market which is used to identify the security:         <ul> <li>XHKG</li> <li>Required if:</li></ul></li></ul>  |               | 48            |         | SecurityID                            | Υ | Instrument identifier  |  |  |
| security:  NHKG  Required if:  SecurityIDSource (22) = 8 (Exchange)   | security:  XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).   |               | 22            |         | SecurityIDSource                      | Y | ■ 8 = Exchange Symbol Required if:   |  |  |
|   | End Component Block   |               |               |         |                                       | N | security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange  |  |  |
| End Component Block   |   | End           | Comp          | onent B | lock                                  |   |  |  |  |



#### **Message Trailer**

### 7.9.1.3 New (AE) - BCAN Field Submission to Exchange by Purchasing Counterparty

The purchasing counterparty sends this message to Exchange for tagging BCAN Field of purchasing side of an off-exchange trade upon receiving the off-exchange trade reported by the seller if the alleged trade quantity is larger than or equal to one board lot.

|               | FIX Ta        | eg .       | <u>Field Name</u>                     | Required? | <u>Description</u>   |
|---------------|---------------|------------|---------------------------------------|-----------|--|
| Mes           | ssage         | Heade      | <u>r</u>                              |           |  |
|               | <u>35</u>     |            | <u>MsgType</u>                        | <u>Y</u>  | AE = Trade Capture Report  |
| Mes           | ssage         | Body       |                                       |           |  |
|               | <u>571</u>    |            | TradeReportID                         | <u>Y</u>  | Client specified unique identifier of the trade capture report.                                  |
|               | 1003          | <u> </u>   | <u>TradeID</u>                        | <u>Y</u>  | Unique ID as assigned to the trade by the exchange.  |
|               | <u>487</u>    |            | <u>TradeReportTransType</u>           | <u>N</u>  | Identifies the trade report message transaction type:  ■ 0 = New                                 |
|               | <u>856</u>    |            | <u>TradeReportType</u>                | <u>Y</u>  | Type of the Trade Report:  4 = Addendum  |
|               | 1123          | 3          | TradeHandlingInstr                    | N         | Indicates how the trade capture report should be handled by the receiver:  6 = One-party report  |
|               | <u>31</u>     |            | <u>LastPx</u>                         | <u>Y</u>  | Execution Price  Must be the same as in the original trade                                       |
|               | <u>32</u>     |            | <u>LastQty</u>                        | <u>Y</u>  | Execution Size  Must be the same as in the original trade  |
|               | <u>60</u>     |            | <u>TransactTime</u>                   | <u>Y</u>  | The time at which the particular message was generated.  |
| Com           | poner         | nt Block   | <trdcaprptsidegrp></trdcaprptsidegrp> |           |  |
|               | <u>552</u>    |            | <u>NoSides</u>                        | <u>Y</u>  | Number of sides:  1  |
| <u></u>       | <u>54</u>     |            | Side                                  | <u>Y</u>  | Side of the trade  1 = Buy   |
| <u></u>       | Component     |            | Block <parties></parties>             |           |  |
| <u></u>       | <u>453</u>    |            | <u>NoPartyIDs</u>                     | <u>Y</u>  | Number of party identifiers. The value in this field should be 2.                                |
| $\rightarrow$ | $\rightarrow$ | <u>448</u> | <u>PartyID</u>                        | <u>Y</u>  | Broker ID/ BCAN Field of the buyer side.   |
| <u>→</u>      | <u>→</u>      | <u>447</u> | <u>PartyldSource</u>                  | <u>Y</u>  | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code |



| <u> →</u> :       | <u>452</u> | <u>PartyRole</u>        | Y        | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that submitted this Trade Capture Report to provide the buyer side BCAN Field)  3 = Client ID (BCAN Field) - mandatory for manual trade with LastQty >= 1 board lot. |
|-------------------|------------|-------------------------|----------|--|
| <u>→</u> <u>E</u> | nd Compon  | nent Block              |          |  |
| End Co            | mponent B  | <u>lock</u>             |          |  |
| Compo             | nent Block | < <u>Instrument&gt;</u> |          |  |
|                   | <u>48</u>  | <u>SecurityID</u>       | <u>Y</u> | Instrument identifier  Must be the same as in the original trade   |
|                   | 22         | <u>SecurityIDSource</u> | Y        | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
| Ž                 | <u>207</u> | SecurityExchange        | <u>N</u> | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End Co            | mponent B  | l <u>ock</u>            |          |  |
| Messa             | ge Trailer |                         |          |  |

# 7.9.2 Trade Capture Report - Semi-automatic Odd lot/Special lot Trade

### 7.9.2.1 New (AE)

The client sends this message to report a Odd lot/Special lot trade in semi-automatic trading, pointing to a resting/existing order.

| FIX Tag       | Field Name           | Required? | Description  |  |  |  |  |  |
|---------------|----------------------|-----------|--|--|--|--|--|--|
| Message Heade | Message Header       |           |  |  |  |  |  |  |
| 35            | MsgType              | Υ         | AE = Trade Capture Report  |  |  |  |  |  |
| Message Body  |                      |           |  |  |  |  |  |  |
| 571           | TradeReportID        | N         | Client specified unique identifier of the trade capture report.  |  |  |  |  |  |
| 487           | TradeReportTransType | N         | Identifies the trade report message transaction type:  • 0 = New |  |  |  |  |  |
| 856           | TradeReportType      | Υ         | Type of the Trade Report:  ■ 0 = Submit                          |  |  |  |  |  |
| 828           | TrdType              | Υ         | Type of the trade being reported:  102 = Odd Lot Trade           |  |  |  |  |  |



| 1123          |               |         | TradeHandlingInstr                    | N | Indicates how the trade capture report should be handled by the receiver:  1 = Two Party Report  |
|---------------|---------------|---------|---------------------------------------|---|--|
|               | 31            |         | LastPx                                | Υ | Execution Price  |
|               | 32            |         | LastQty                               | Υ | Execution Size   |
|               | 60            |         | TransactTime                          | Υ | The time at which the particular message was generated.  |
| Con           | ponen         | t Block | <trdcaprptsidegrp></trdcaprptsidegrp> |   |  |
|               | 552           |         | NoSides                               | Υ | Number of sides:  2 = Default  |
| $\rightarrow$ | 5             | 54      | Side                                  | Y | Side of the trade  1 = Buy  2 = Sell  5 = Sell Short   |
| $\rightarrow$ | Comp          | onent   | Block <parties></parties>             |   |  |
| $\rightarrow$ | 4             | 53      | NoPartyIDs                            | Υ | <ul> <li>Number of party identifiers:</li> <li>For submitting side group, this value can be 1 or 2 or 3.</li> <li>For the counterparty side, this value should be 1</li> </ul>   |
| <b>→</b>      | →             | 448     | PartyID                               | Y | Broker ID/Counterparty Broker ID/BS User ID/BCAN Field.  Only the PartyIDs for the submitter should be present in the side group applicable to the submitter of the Trade Report (i.e. PartyIDs applicable to PartyRoles 1, 3 and 75).  Only the PartyID of the counterparty should be present in the side group applicable to the contra party of the trade Report (i.e. PartyID applicable to PartyRole 17).   |
| $\rightarrow$ | $\rightarrow$ | 447     | PartyldSource                         | Υ | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |
| <b>→</b>      | $\rightarrow$ | 452     | PartyRole                             | Y | Role of the specified PartyID (448):  For the submitting side group:  1 = Executing Firm (Broker ID that is submitting this Trade Capture Report) - mandatory  3 = Client ID (BCAN Field) - mandatory for trade with LastQty >= 1 board lot  75 = Location ID (BS User ID)  For the counterparty side (i.e., the side for resting order) group:  17 = Contra Firm (Counterparty Broker ID for this trade) - mandatory  In general, there must be  Broker ID with PartyRole = 1, and  Broker ID with PartyRole = 17 |
| $\rightarrow$ | End (         | Compon  | ent Block                             |   |  |
| $\rightarrow$ | Comp          | ponent  | Block <clrinstgrp></clrinstgrp>       |   |  |



| $\rightarrow$ | 5               | 76       | NoClearingInstructions        | N  | Number of clearing instructions. Always set to 1.   |  |
|---------------|-----------------|----------|-------------------------------|----|---|--|
| <b>→</b>      | $\rightarrow$   | 577      | ClearingInstruction           | N  | Eligibility of this trade for clearing and central counterparty processing:  0 = Process Normally   |  |
| $\rightarrow$ | End (           | Compon   | ent Block                     |    |   |  |
| $\rightarrow$ | Com             | ponent   | Block < TradeReportOrderDetai | l> |   |  |
| <b>→</b>      | \$              | 37       | OrderID                       | N  | OrderID of the counterparty Odd lot/Special lot Order.  Applicable only if the Side refers to the resting order.  |  |
| $\rightarrow$ | É               | 18       | ExecInst                      | N  | <ul> <li>Instructions for trade report handling:</li> <li>x (lower case X) = Ignore Notional Value Checks</li> <li>Absence of this field is interpreted as None (i.e. system will perform Notional Value check).</li> </ul> |  |
| <b>→</b>      | 5               | 28       | OrderCapacity                 | N  | Designates the capacity of the firm reporting this trade:  • A = Agency • P = Principal   |  |
| $\rightarrow$ | End (           | Compon   | ent Block                     |    |   |  |
| <b>→</b>      | -               | 77       | PositionEffect                | N  | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.                           |  |
| $\rightarrow$ | į               | 58       | Text                          | N  | Free Text   |  |
| End           | Comp            | onent B  | lock                          |    |   |  |
| Com           | poner           | nt Block | <instrument></instrument>     |    |   |  |
|               | 48              |          | SecurityID                    | Υ  | Instrument identifier   |  |
|               | 22              |          | SecurityIDSource              | Υ  | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified  |  |
|               | 207             |          | SecurityExchange              | N  | The market which is used to identify the security:  XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).  |  |
| End           | Comp            | onent B  | lock                          |    |   |  |
| Mes           | Message Trailer |          |                               |    |   |  |



# 7.9.3 Trade Capture - Confirmation/Acknowledgement

# 7.9.3.1 Trade Accepted (AE) - Off Exchange Trade

The OCG-C sends this message to the submitter of the trade and also to the counterparty (if applicable).

| FIX Tag   | Field Name                | Required? | Description   |
|---|---------------------------|-----------|---|
| Message Heade   | <u>er</u>                 |           |   |
| 35  | MsgType                   | Υ         | AE = Trade Capture Report   |
| Message Body  |                           |           |   |
| 571   | TradeReportID             | N         | Unique Identification for the Trade Capture<br>Report assigned by the reporting side of the<br>Trade (to be returned to the reporting broker) |
| 1003  | TradeID                   | Y         | Unique identifier as assigned to the trade by the exchange.   |
| 487   | TradeReportTransType      | Y         | Identifies the trade report message transaction type:  0 = New (for the non-reporting side) 2 = Replace (for the reporting side)              |
| 856   | TradeReportType           | Y         | Type of the Trade Report:  0 = Submit   |
| 1123  | TradeHandlingInstr        | N         | Indicates how the trade capture report should be handled by the receiver:  • 0 = Trade Confirm  |
| 828   | TrdType                   | Y         | Type of the trade being reported:  4 = Late Trade  22 = Privately Negotiated Trade  102 = Odd Lot Trade  104 = Overseas Trade                 |
| 150   | ЕхесТуре                  | N         | Execution type:  • F = Trade  |
| 939   | TrdRptStatus              | N         | Trade Report Status: ■ 0 = Accepted   |
| 31  | LastPx                    | Υ         | Execution Price   |
| 32  | LastQty                   | Υ         | Execution Size  |
| 60  | TransactTime              | Y         | The time at which the particular message was generated.   |
| Component Block <trdcaprptsidegrp></trdcaprptsidegrp> |                           |           |   |
| 552   | NoSides                   | Y         | Number of sides:  1 = Overseas  2 = Default   |
| → 54  | Side                      | Y         | Side of the trade  1 = Buy 2 = Sell 5 = Sell Short  |
| → Component   | Block <parties></parties> |           |   |



| $\rightarrow$ | 453                 |         | NoPartyIDs   | Υ      | Number of party identifiers. The value in this field should be 1 or 2 or 3.  |  |  |
|---------------|---------------------|---------|--|--------|--|--|--|
| $\rightarrow$ | $\rightarrow$       | 448     | PartyID  | Υ      | Broker ID/Counterparty Broker ID/BS User ID.   |  |  |
| $\rightarrow$ | $\rightarrow$       | 447     | PartyldSource  | Υ      | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |  |  |
| $\rightarrow$ | $\rightarrow$       | 452     | PartyRole  | Y      | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is receiving this trade)  17 = Contra Firm (Counterparty Broker ID for this trade)  75 = Location ID (BS User ID).  For any TrdType, there will be one Broker ID with PartyRole = 1.  Counterparty Broker ID (PartyRole=17) is not applicable if:  TradeHandlingInstr (1123) is 1 (Two party report) and OrderCategory (1115) is A  OR  TradeHandlingInstr (1123) is 6 (One party report)  Location ID (PartyRole = 75) is with relation to |  |  |
| $\rightarrow$ | End                 | Compon  | ent Block  |        | the Broker ID that reported this trade.  |  |  |
| $\rightarrow$ | Con                 | nponent | Block <clrinstgrp></clrinstgrp>  |        |  |  |  |
| $\rightarrow$ |                     | 576     | NoClearingInstructions   | N      | Number of clearing instructions. Always set to 1.  |  |  |
| $\rightarrow$ | $\rightarrow$       | 577     | ClearingInstruction  | N      | Eligibility of this trade for clearing and central counterparty processing:  0 = Process normally  1 = Exclude from all netting  14 = Buy-In   |  |  |
| $\rightarrow$ | End                 | Compon  | ent Block  |        |  |  |  |
| $\rightarrow$ | Con                 | nponent | Block <tradereportorderde< td=""><td>etail&gt;</td><td></td></tradereportorderde<> | etail> |  |  |  |
| $\rightarrow$ |                     | 528     | OrderCapacity  | N      | Designates the capacity of the firm:  • A = Agency • P = Principal   |  |  |
| $\rightarrow$ | End Component Block |         |  |        |  |  |  |
| <b>→</b>      |                     | 77      | PositionEffect   | N      | Indicates whether the resulting position after a trade should be an opening position or closing position:  C = Close  Applicable only if:  Side (54) = 1 (Buy) to indicate covering a short sell.  |  |  |
|               |                     |         |  |        |  |  |  |
| $\rightarrow$ |                     | 58      | Text   | N      | Free Text  |  |  |



| $\rightarrow$ | 1115          | OrderCategory             | N | <ul> <li>Defines the type of interest behind a trade</li> <li>■ A = Internal Cross Order</li> <li>Absence of this field means the trade is not concluded within the same firm</li> </ul> |
|---------------|---------------|---------------------------|---|--|
| End           | Component B   | lock                      |   |  |
| Com           | ponent Block  | <instrument></instrument> |   |  |
|               | 48            | SecurityID                | Υ | Instrument identifier  |
|               | 22            | SecurityIDSource          | Y | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |
|               | 207           | SecurityExchange          | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |
| End           | Component B   | lock                      |   |  |
|               | 5681          | ExchangeTradeType         | N | Exchange assigned Trade Type:  M = Manual Trade  S = Manual – Non Standard Price Trade  Q = Special Lot Trade  P = Odd Lot Trade  R = Previous Day's Trade  V = Overseas Trade           |
| Me            | ssage Trailer |                           |   |  |

# 7.9.3.2 Trade Accepted (AE) – Semi-automatic Odd lot/Special lot Trade

The OCG-C sends this message to the submitter of the trade to confirm the acceptance.

| FIX Tag        | Field Name           | Required? | Description   |  |  |  |  |
|----------------|----------------------|-----------|---|--|--|--|--|
| Message Header |                      |           |   |  |  |  |  |
| 35             | MsgType              | Υ         | AE = Trade Capture Report   |  |  |  |  |
| Message Body   |                      |           |   |  |  |  |  |
| 571            | TradeReportID        | N         | Unique Identification for the Trade Capture<br>Report assigned by the reporting side of the<br>Trade (to be returned to the reporting broker) |  |  |  |  |
| 1003           | TradeID              | Y         | Unique identifier as assigned to the trade by the exchange.   |  |  |  |  |
| 487            | TradeReportTransType | Y         | Identifies the trade report message transaction type:  2 = Replace (for the reporting side)   |  |  |  |  |
| 856            | TradeReportType      | Υ         | Type of the Trade Report:<br>■ 0 = Submit   |  |  |  |  |
| 1123           | TradeHandlingInstr   | N         | Indicates how the trade capture report should be handled by the receiver:  0 = Trade Confirm  |  |  |  |  |



|   | 004   |     | - I-                   | v |  |  |  |
|---|---|-----|------------------------|---|--|--|--|
| 828   |   | 3   | TrdType                | Y | Type of the trade being reported:  102 = Odd Lot Trade   |  |  |
| 150   |   | )   | ЕхесТуре               | N | Execution type:  F = Trade   |  |  |
| 939   |   | 9   | TrdRptStatus           | N | Trade Report Status:  0 = Accepted   |  |  |
| 31  |   |     | LastPx                 | Υ | Execution Price  |  |  |
|   | 32  |     | LastQty                | Υ | Execution Size   |  |  |
|   | 60  |     | TransactTime           | Υ | The time at which the particular message was generated.  |  |  |
| Component Block <trdcaprptsidegrp></trdcaprptsidegrp> |   |     |                        |   |  |  |  |
|   | 552   |     | NoSides                | Υ | Number of sides:  2 = Default  |  |  |
| <b>→</b>  |   | 54  | Side                   | Y | Side of the trade  1 = Buy 2 = Sell 5 = Sell Short   |  |  |
| $\rightarrow$   | Component Block <parties></parties>                               |     |                        |   |  |  |  |
| $\rightarrow$   |   | 453 | NoPartyIDs             | Υ | Number of party identifiers. The value in this field should be 1 or 2 or 3.  |  |  |
| $\rightarrow$   | $\rightarrow$   | 448 | PartyID                | Υ | Broker ID/Counterparty Broker ID/BS User ID.   |  |  |
| $\rightarrow$   | $\rightarrow$   | 447 | PartyldSource          | Y | Defines the naming convention used in specifying the PartyID (448): D = Proprietary/Custom Code  |  |  |
| <b>→</b>  | $\rightarrow$   | 452 | PartyRole              | Y | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is receiving this trade)  17 = Contra Firm (Counterparty Broker ID for this trade)  75 = Location ID (BS User ID).  In general, there will be  one Broker ID with PartyRole = 1, and  one Broker ID with PartyRole = 17  Location ID (PartyRole = 75) is with relation to the Broker ID that reported this trade. |  |  |
| $\rightarrow$   | End Component Block   |     |                        |   |  |  |  |
| $\rightarrow$   | → Component Block <clrinstgrp></clrinstgrp>                       |     |                        |   |  |  |  |
| $\rightarrow$   |   | 576 | NoClearingInstructions | N | Number of clearing instructions. Always set to 1.  |  |  |
| $\rightarrow$   | $\rightarrow$   | 577 | ClearingInstruction    | N | Eligibility of this trade for clearing and central counterparty processing:  0 = Process normally  |  |  |
| $\rightarrow$   | End Component Block   |     |                        |   |  |  |  |
| $\rightarrow$   | Component Block <tradereportorderdetail></tradereportorderdetail> |     |                        |   |  |  |  |
|   |   |     |                        |   |  |  |  |



| →       528       OrderCapacity       N       Designates the capacity of the firm:         ■ A = Agency       ■ P = Principal         →       End Component Block         →       77       PositionEffect       N       Indicates whether the resulting position after a trade should be an opening position or closing position:         ■ C = Close       Applicable only if:       ■ Side (54) = 1 (Buy) to indicate covering a short sell.         →       58       Text       N       Free Text         →       1115       OrderCategory       N       Defines the type of interest behind a trade         ■ A = Internal Cross Order       Absence of this field means the trade is not concluded within the same firm         End Component Block       Component Block <instrument< td="">         Component Block <instrument< td="">       Y       Instrument identifier         22       SecurityID       Y       Instrument identifier         22       SecurityIDSource       Y       Identifies the source of the SecurityID (48):         ■ 8 = Exchange Symbol       Required if:       SecurityID (48) is specified         207       SecurityExchange       N       The market which is used to identify the security:         ■ XHKG       Required if:       SecurityIDSource (22) = 8 (Exchange Symbol).</instrument<></instrument<> |  |
|---|--|
| PositionEffect  N Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close Applicable only if:  • Side (54) = 1 (Buy) to indicate covering a short sell.  → 58 Text  N Free Text  → 1115 OrderCategory  N Defines the type of interest behind a trade  • A = Internal Cross Order Absence of this field means the trade is not concluded within the same firm  End Component Block  Component Block < Instrument  48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  • 8 = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security:  • XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   | = Agency   |
| a trade should be an opening position or closing position:  C = Close Applicable only if: Side (54) = 1 (Buy) to indicate covering a short sell.  Free Text  Defines the type of interest behind a trade A = Internal Cross Order Absence of this field means the trade is not concluded within the same firm  End Component Block  Component Block <instrument>  48 SecurityID Y Instrument identifier  22 SecurityIDSource Y Identifies the source of the SecurityID (48): B = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).</instrument>  |  |
| → 1115 OrderCategory N Defines the type of interest behind a trade  A = Internal Cross Order Absence of this field means the trade is not concluded within the same firm  End Component Block  Component Block <instrument>  48 SecurityID Y Instrument identifier  22 SecurityIDSource Y Identifies the source of the SecurityID (48):  B = Exchange Symbol Required if: SecurityID (48) is specified  207 SecurityExchange N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).</instrument>  | should be an opening position or position: = Close ble only if: de (54) = 1 (Buy) to indicate covering a |
| A = Internal Cross Order Absence of this field means the trade is not concluded within the same firm  End Component Block  Component Block <instrument>  48</instrument>  | xt   |
| Component Block <instrument>  48</instrument>   | = Internal Cross Order<br>e of this field means the trade is not   |
| 48 SecurityID  Y Instrument identifier  22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  • 8 = Exchange Symbol Required if: SecurityID (48) is specified  The market which is used to identify the security:  • XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |  |
| 22 SecurityIDSource  Y Identifies the source of the SecurityID (48):  8 = Exchange Symbol Required if: SecurityID (48) is specified  N The market which is used to identify the security:  XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).   |  |
| <ul> <li>8 = Exchange Symbol Required if: SecurityID (48) is specified</li> <li>207 SecurityExchange</li> <li>N The market which is used to identify the security:         <ul> <li>XHKG</li> <li>Required if: SecurityIDSource (22) = 8 (Exchange Symbol).</li> </ul> </li> </ul>  | ent identifier   |
| security:  XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).   | Exchange Symbol  |
|   | r:<br>IKG<br>ed if:<br>curityIDSource (22) = 8 (Exchange   |
| End Component Block   |  |
| 5681 ExchangeTradeType N Exchange assigned Trade Type:  ■ E = Special Lot – Semi-Automatic  ■ O = Odd Lot – Semi-Automatic  | Special Lot – Semi-Automatic   |
|   |  |
| O Odd Lot   | odd Est  |

#### 7.9.3.3 Trade Cancelled (AE) - Off Exchange Trade

The OCG-C sends this message to both sides of the trade if it's a Two Party Report, only one side if it's a One Party Report.

| FIX Tag        | Field Name     | Required? | Description               |  |  |
|----------------|----------------|-----------|---------------------------|--|--|
| Message Header | Message Header |           |                           |  |  |
| 35             | MsgType        | Υ         | AE = Trade Capture Report |  |  |
| Message Body   |                |           |                           |  |  |



| į                | Report assigned by the |                                       | Unique Identification for the Trade Capture<br>Report assigned by the reporting side of the<br>Trade (to be returned to the reporting broker) |   |  |
|------------------|------------------------|---------------------------------------|---|---|--|
| 1                | 1003                   | TradeID                               | Υ   | Unique identifier as assigned to the trade by the exchange.   |  |
|                  | 487                    | TradeReportTransType                  | Y   | <ul> <li>Identifies the trade report message transaction type:</li> <li>0 = New (for the party opposite to that requesting this cancel)</li> <li>2 = Replace (for the party requesting this cancel)</li> <li>5 = Cancel due to back out of trade (for both buyer and seller if ExecType = L)</li> </ul> |  |
| 8                | 856                    | TradeReportType                       | Υ   | Type of the Trade Report:  6 = Trade Report Cancel  |  |
| 1                | 123                    | TradeHandlingInstr                    | N   | Indicates how the trade capture report should be handled by the receiver:  • 0 = Trade Confirm  |  |
| 1                | 150                    | ЕхесТуре                              | N   | Execution Type that indicates the reason for the generation of this confirmation:  H = Trade Cancel (by the counter-party)  L = Triggered or activated by System (cancelled by the exchange)  |  |
|                  | 31                     | LastPx                                | Υ   | Execution Price   |  |
|                  | 32                     | LastQty                               | Υ   | Execution Size  |  |
|                  | 60                     | TransactTime                          | Υ   | The time at which the particular message was generated.   |  |
| Compo            | nent Block             | <trdcaprptsidegrp></trdcaprptsidegrp> |   |   |  |
| į                | 552                    | NoSides                               | Υ   | Number of sides:  1   |  |
| <b>→</b>         | 54                     | Side                                  | Y   | Side of the trade  1 = Buy 2 = Sell 5 = Sell Short  |  |
| → C              | Component I            | Block <parties></parties>             |   |   |  |
| →                | 453                    | NoPartyIDs                            | Υ   | Number of party identifiers. The value in this field should be 1 or 2.  |  |
| → <del>-</del>   | → 448                  | PartyID                               | Υ   | Broker ID for this side of the trade/BS User ID.  |  |
| → - <del>2</del> | <b>→</b> 447           | PartyldSource                         | Y   | Defines the naming convention used in specifying the PartylD (448):  D = Proprietary/Custom Code  |  |
| → ÷              | → 452                  | PartyRole                             | Y   | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that is receiving this message)  75 = Location ID (BS User ID)  |  |
| → E              | nd Compon              | ent Block                             |   |   |  |
| End Co           | mponent B              | lock                                  |   |   |  |



| Component Block <instrument></instrument> |                  |   |   |  |  |
|---|------------------|---|---|--|--|
| 48  | SecurityID       | Υ | Instrument identifier   |  |  |
| 22  | SecurityIDSource | Υ | Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified       |  |  |
| 207                                       | SecurityExchange | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol). |  |  |
| End Component Block                       |                  |   |   |  |  |
| Message Trailer                           |                  |   |   |  |  |

# 7.9.3.4 Trade Cancelled (AE) - Semi-automatic Odd lot/Special lot Trade

The OCG-C sends this message to the submitter of the original trade when the trade is cancelled by the exchange.

| FIX Tag   | Field Name           | Required? | Description   |  |  |  |
|---|----------------------|-----------|---|--|--|--|
| Message Heade   | Message Header       |           |   |  |  |  |
| 35  | MsgType              | Υ         | AE = Trade Capture Report   |  |  |  |
| Message Body  |                      |           |   |  |  |  |
| 1003  | TradeID              | Υ         | Unique identifier as assigned to the trade by the exchange.   |  |  |  |
| 487   | TradeReportTransType | Υ         | Identifies the trade report message transaction type:  5 = Cancel due to back out of trade (if ExecType = L)  |  |  |  |
| 856   | TradeReportType      | Υ         | Type of the Trade Report:  6 = Trade Report Cancel  |  |  |  |
| 1123  | TradeHandlingInstr   | N         | Indicates how the trade capture report should be handled by the receiver:  • 0 = Trade Confirm  |  |  |  |
| 150   | ЕхесТуре             | N         | Execution Type that indicates the reason for the generation of this confirmation:  L = Triggered or activated by System (cancelled by the exchange) |  |  |  |
| 31  | LastPx               | Υ         | Execution Price   |  |  |  |
| 32  | LastQty              | Υ         | Execution Size  |  |  |  |
| 60  | TransactTime         | Y         | The time at which the particular message was generated.   |  |  |  |
| Component Block <trdcaprptsidegrp></trdcaprptsidegrp> |                      |           |   |  |  |  |
| 552   | NoSides              | Y         | Number of sides:  1   |  |  |  |



| → 54          |               | 54       | Side                      | Y | Side of the trade  1 = Buy 2 = Sell 5 = Sell Short   |
|---------------|---------------|----------|---------------------------|---|--|
| $\rightarrow$ | Com           | ponent   | Block <parties></parties> |   |  |
| $\rightarrow$ |               | 453      | NoPartyIDs                | Y | Number of party identifiers. The value in this field should be 1 or 2.   |
| $\rightarrow$ | $\rightarrow$ | 448      | PartyID                   | Υ | Broker ID for this side of the trade/BS User ID.   |
| $\rightarrow$ | $\rightarrow$ | 447      | PartyldSource             | Y | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code   |
| → → 452       |               | 452      | PartyRole                 | Y | <ul> <li>Role of the specified PartyID (448):</li> <li>1 = Executing Firm (Broker ID that is receiving this message)</li> <li>75 = Location ID (BS User ID)</li> </ul> |
| $\rightarrow$ | End           | Compon   | ent Block                 |   |  |
| End           | Comp          | onent B  | lock                      |   |  |
| Com           | pone          | nt Block | <instrument></instrument> |   |  |
|               | 48            |          | SecurityID                | Υ | Instrument identifier  |
| 22            |               |          | SecurityIDSource          | Υ | Identifies the source of the SecurityID (48): ■ 8 = Exchange Symbol Required if: SecurityID (48) is specified  |
| 207           |               | 7        | SecurityExchange          | N | The market which is used to identify the security:  ■ XHKG  Required if:  SecurityIDSource (22) = 8 (Exchange Symbol).   |
| End           | Comp          | onent B  | lock                      |   |  |
| Me            | ssage         | Trailer  |                           |   |  |
|               |               |          |                           |   |  |

#### 7.9.3.5 Trade Capture Report Ack (AR)

The OCG-C sends this message to the sender of the business message to:

- reject a trade submission received from the initiator of the 35=AE message
- reject a cancel request received from
  - o the counterparty of the 35 = AE message, for an off exchange trade
  - \_ from either side of the 35 = AE message, for an odd lot/special lot trade in semi-automatic trading
- accept or reject BCAN Field submission to Exchange by the purchasing side

| FIX Tag        | Field Name | Required? | Description                   |  |  |
|----------------|------------|-----------|-------------------------------|--|--|
| Message Header |            |           |                               |  |  |
| 35             | MsgType    | Υ         | AR = Trade Capture Report Ack |  |  |



| TradeReportID   Y   Unique Identification for the Trade Capture Report assigned by the reporting side of the Trade (to be returned to the reporting proker).   | Message Body                          |               |          |                                       |   |   |  |  |  |
|--|---------------------------------------|---------------|----------|---------------------------------------|---|---|--|--|--|
| the exchange.  487 TradeReportTransType  N Identifies the trade report message transaction type:  0 = New  856 TradeReportType  Y Type of the Trade Report:  0 = Submit  4 = Addendum  6 = TradeReport Cancel  1123 TradeHandlingInstr  N Indicates how the trade capture report should be handled by the receiver:  1 = Two Party Report  6 = One Party Report  1 = Rejected  7 Trade Report Status:  0 = Accepted  1 = Rejected  1 = Rejected  Component Block <trdcaprptsidegrp>  552 NoSides  Y Number of sides:  1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report)  2 = Default  3 Side  Y Side of the trade  1 = Buy  2 = Sell  5 = Sell Short  Component Block <parties>  453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2 or 3.  At 488 PartyID  Y Broker ID/Counterparty Broker ID/BS User ID.  PartyIdSource  Y Defines the naming convention used in</parties></trdcaprptsidegrp>  |                                       | 571           |          | TradeReportID                         | Y | Report assigned by the reporting side of the  |  |  |  |
| type:    0 = New   |                                       | 100           | 3        | TradeID                               | N |   |  |  |  |
| # 0 = Submit # 4 = Addendum # 6 = Trade Report Cancel  1123 TradeHandlingInstr  N Indicates how the trade capture report should be handled by the receiver: # 1 = Two Party Report # 6 = One Party Report # 6 = One Party Report # 1 = Rejected  60 TransactTime  Y The time at which the particular message was generated.  Component Block <trdcaprptsidegrp>  552 NoSides  Y Number of sides: # 1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report) # 2 = Default  → Side</trdcaprptsidegrp>  |                                       | 487           | 7        | TradeReportTransType                  | N | type:   |  |  |  |
| be handled by the receiver:  ■ 1 = Two Party Report  ■ 6 = One Party Report  ■ 1 = Report Status:  ■ 0 = Accepted  ■ 1 = Rejected  60 TransactTime  Y The time at which the particular message was generated.  Component Block < TrdCapRptSideGrp>  552 NoSides  Y Number of sides:  ■ 1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report)  ■ 2 = Default  → 54 Side  Y Side of the trade  ■ 1 = Buy  ■ 2 = Sell  ■ 5 = Sell Short  → Component Block <parties>  → 453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2 or 3.  → → 448 PartyID  Y Broker ID/Counterparty Broker ID/BS User ID.  → → 447 PartyIdSource  Y Defines the naming convention used in</parties>  |                                       | 856           | 5        | TradeReportType                       | Υ | 0 = Submit<br>4 = Addendum  |  |  |  |
| # 0 = Accepted  1 = Rejected  7 The time at which the particular message was generated.  Component Block <trdcaprptsidegrp>  552 NoSides  7 Number of sides:  1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report)  2 = Default  3 Side Fide Side of the trade  1 = Buy  2 = Sell  5 = Sell Short  Component Block <parties>  453 NoPartyIDs  7 Number of party identifiers. The value in this field should be 1 or 2 or 3.  7 August Augus</parties></trdcaprptsidegrp> |                                       | 1123          |          | TradeHandlingInstr                    | N | be handled by the receiver:  1 = Two Party Report   |  |  |  |
| generated.  Component Block <trdcaprptsidegrp>  552 NoSides  Y Number of sides:  ■ 1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report)  ■ 2 = Default  → 54 Side  Y Side of the trade  ■ 1 = Buy  ■ 2 = Sell  ■ 5 = Sell Short  → Component Block <parties>  → 453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2 or 3.  → → 448 PartyID  Y Broker ID/Counterparty Broker ID/BS User ID.  → → 447 PartyIdSource  Y Defines the naming convention used in</parties></trdcaprptsidegrp>   |                                       | 939           |          | TrdRptStatus                          | N | 0 = Accepted  |  |  |  |
| 552       NoSides       Y       Number of sides:         ■ 1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report)       ■ 2 = Default         →       54       Side       Y       Side of the trade         ■ 1 = Buy       ■ 2 = Sell         ■ 5 = Sell Short       →       5 = Sell Short         →       A53       NoPartyIDs       Y       Number of party identifiers. The value in this field should be 1 or 2 or 3.         → → 448       PartyID       Y       Broker ID/Counterparty Broker ID/BS User ID.         → → 447       PartyIdSource       Y       Defines the naming convention used in  |                                       | 60            |          | TransactTime                          | Υ | -   |  |  |  |
| ■ 1 = Overseas or internalized or TradeHandlingInstr (1123) is 6 (One party report) ■ 2 = Default  → 54 Side  Y Side of the trade ■ 1 = Buy ■ 2 = Sell ■ 5 = Sell Short  → Component Block <parties>  → 453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2 or 3.  → → 448 PartyID  Y Broker ID/Counterparty Broker ID/BS User ID.  → → 447 PartyIdSource  Y Defines the naming convention used in</parties>   | Com                                   | npone         | nt Block | <trdcaprptsidegrp></trdcaprptsidegrp> |   |   |  |  |  |
| 1 = Buy 2 = Sell 5 = Sell Short  → Component Block < Parties>  → 453 NoPartyIDs  Y Number of party identifiers. The value in this field should be 1 or 2 or 3.  → 448 PartyID  Y Broker ID/Counterparty Broker ID/BS User ID.  → 447 PartyIdSource  Y Defines the naming convention used in  |                                       | 552           |          | NoSides                               | Υ | ■ 1 = Overseas or internalized or<br><u>TradeHandlingInstr (1123) is 6 (One party report)</u> |  |  |  |
| <ul> <li>→ 453 NoPartyIDs</li> <li>Y Number of party identifiers. The value in this field should be 1 or 2 or 3.</li> <li>→ → 448 PartyID</li> <li>Y Broker ID/Counterparty Broker ID/BS User ID.</li> <li>→ → 447 PartyIdSource</li> <li>Y Defines the naming convention used in</li> </ul>   | $\rightarrow$                         | → 54          |          | Side                                  | Υ | ■ 1 = Buy<br>■ 2 = Sell   |  |  |  |
| + 33 Find arty is a field should be 1 or 2 or 3.  → → 448 PartyID Y Broker ID/Counterparty Broker ID/BS User ID.  → → 447 PartyIdSource Y Defines the naming convention used in  | → Component Block <parties></parties> |               |          |                                       |   |   |  |  |  |
| → → 447 PartyldSource Y Defines the naming convention used in  | $\rightarrow$                         | → 453         |          | NoPartyIDs                            | Υ |   |  |  |  |
|  | $\rightarrow$                         | $\rightarrow$ | 448      | PartyID                               | Υ | Broker ID/Counterparty Broker ID/BS User ID.  |  |  |  |
| D = Proprietary/Custom Code  | $\rightarrow$                         | $\rightarrow$ | 447      | PartyldSource                         | Υ | specifying the PartyID (448):   |  |  |  |



| <b>→</b>            | <b>→</b> | 452      | PartyRole                 | Y | Role of the specified PartyID (448):  1 = Executing Firm (Broker ID that submitted the Trade Capture Report)  17 = Contra Firm (Counterparty Broker ID for the trade)  75 = Location ID (BS User ID)  For any TrdType, there will be one Broker ID with PartyRole = 1.  Counterparty Broker ID (PartyRole=17) is not applicable if:  TradeHandlingInstr (1123) is 6 (One party report)  Location ID (PartyRole = 75) is with relation to the Broker ID that reported this trade. |  |
|---------------------|----------|----------|---------------------------|---|--|--|
| $\rightarrow$       | End      | Compon   | ent Block                 |   |  |  |
| End                 | Com      | onent Bl | lock                      |   |  |  |
| Com                 | pone     | nt Block | <instrument></instrument> |   |  |  |
|                     | 48       |          | SecurityID                | Υ | Instrument identifier  |  |
|                     | 22       |          | SecurityIDSource          | Υ | Identifies the source of the SecurityID (48):  8 = Exchange Symbol  Required if:  SecurityID (48) is specified   |  |
|                     | 207      |          | SecurityExchange          | N | The market which is used to identify the security:  XHKG  Required if: SecurityIDSource (22) = 8 (Exchange Symbol).  |  |
| End Component Block |          |          |                           |   |  |  |
|                     | 75:      | 1        | TradeReportRejectReason   | N | The code indicating the reason why the trade report is rejected:  4 = Invalid trade type  5 = Price exceeds current price band  6 = Reference price not available  7 = Notional value exceeds threshold  99 = Other  |  |
|                     | 132      | 8        | RejectText                | N | Text explaining the reject reason  |  |
| Mes                 | ssage    | Trailer  |                           |   |  |  |

#### 7.10 Entitlements

# 7.10.1 Party Entitlement Request (CU)

The client sends this message to request for entitlement details.

| FIX Tag | FIX Tag Field Name |   | Description                    |
|---------|--------------------|---|--------------------------------|
| Message | <u>Header</u>      |   |                                |
| 35      | MsgType            | Υ | CU= Party Entitlements Request |



| Message Body    |  |  |  |  |  |  |
|-----------------|--|--|--|--|--|--|
| 1770            | 1770 EntitlementsRequestID Y Client assigned identifier for this request |  |  |  |  |  |
| Message Trailer |  |  |  |  |  |  |

#### 7.10.2 Party Entitlement Report (CV)

The OCG-C sends this message in response to a request for entitlement details.

The OCG-C will fragment this Party Entitlement Report per each Broker ID belonging to the client. The OCG-C will use TotNoPartyList (1512) to specify the total number of Broker IDs for which the entitlement information is provided. The last message will have the LastFragment (893) set to Y.

If any Broker ID belonging to this client is a liquidity provider, then for such a Broker ID, NoEntitlements (1773) will represent the number of symbols that the entitlements are provided for, and a single message fragment will provide the entitlement details for multiple (e.g., up to 10) symbols. For example, if an LP Broker ID is entitled to 15 symbols, two Party Entitlement Report messages will be sent with the first message carrying entitlement details for first 10 symbols, and the second message carrying information for the remaining 5 symbols.

| FIX Tag        | Field Name            | Required? | Description   |
|----------------|-----------------------|-----------|---|
| Message Header |                       |           |   |
| 35             | MsgType               | Υ         | CV = Party Entitlements<br>Report   |
| Message Body   |                       |           |   |
| 1771           | EntitlementsReportID  | Υ         | Identified assigned to this report message.   |
| 1770           | EntitlementsRequestID | N         | Client assigned identifier to<br>the Party Entitlements<br>Request message.<br>Conditionally required if<br>the Party Entitlement<br>Report is in response to a<br>Party Entitlements Request |
| 1511           | RequestResult         | N         | Conditionally required if the Party Entitlement Report is in response to a Party Entitlements Request:  |



|               | 15            | 512   | TotNoPartyList                                      | N | Number of Broker IDs to be returned  |  |              |   |  |
|---------------|---------------|---|---|---|--|--|--------------|---|--|
|               | 893           |   | 893   |   | 893 LastFragm  |  | LastFragment | N | Indicates whether this message is the last in a sequence of fragmented messages:  N = No Y = Yes |
| Comp          | onent B       | Block <partye< th=""><th>ntitlementGrp&gt;</th><th></th><th></th></partye<> | ntitlementGrp>                                      |   |  |  |              |   |  |
|               | 17            | 772   | NoPartyEntitlements                                 | Υ | Number of party entitlement values   |  |              |   |  |
| $\rightarrow$ | Comp          | onent Block <   | PartyDetailGrp>                                     |   |  |  |              |   |  |
| $\rightarrow$ |               | 1671  | NoPartyDetails                                      | Υ | Number of party identifiers. The value in this field should be 1.  |  |              |   |  |
|               | $\rightarrow$ | 1691  | PartyDetailID                                       | Υ | Broker ID  |  |              |   |  |
| <b>→</b>      | <b>→</b>      | 1692  | PartyDetailIDSource                                 | Y | Defines the naming convention used in specifying the PartyID (448):  D = Proprietary/Custom Code             |  |              |   |  |
| <b>→</b>      | $\rightarrow$ | 1693  | PartyDetailRole                                     | Y | Role of the specified PartyID (448):  1 = Executing Firm 35 = Liquidity Provider                             |  |              |   |  |
| $\rightarrow$ | End C         | omponent Blo  | ock   |   |  |  |              |   |  |
| $\rightarrow$ | Comp          | onent Block <   | EntitlementGrp>                                     |   |  |  |              |   |  |
| $\rightarrow$ |               | 1773  | NoEntitlements                                      | N | Number of entitlements here  |  |              |   |  |
| <b>→</b>      | <b>→</b>      | 1774  | EntitlementIndicator                                |   | Determines if the party is entitled:  Y- Entitled  N- Not Entitled  Required if:  NoEntitlements (1773)  > 0 |  |              |   |  |
| <b>→</b>      | → → 1775      |   | EntitlementType                                     | N | Absence of this field indicates the meaning of the entitlement is implicit.  0 = Trade  1 = Make Markets     |  |              |   |  |
| $\rightarrow$ | $\rightarrow$ | Component   | Block <entitlementattribgrp></entitlementattribgrp> |   |  |  |              |   |  |
| $\rightarrow$ | $\rightarrow$ | 1777  | NoEntitlementAttrib                                 | N | Number of entitlement attributes   |  |              |   |  |



| <b>→</b>      | $\rightarrow$         | $\rightarrow$       | 1778     | EntitlementAttribType                          | N | Name of the attribute:  4000 = Minimum Quote obligation  4001 = Maximum Quote Spread Obligation  Required if: NoEntitlementAttrib (1777) > 0 |  |  |
|---------------|-----------------------|---------------------|----------|--|---|--|--|--|
| $\rightarrow$ | $\rightarrow$         | $\rightarrow$       | 1779     | EntitlementAttribDataType                      | N | Data Type of the attribute:  7 = Qty   |  |  |
| <b>→</b>      | →                     | → 1780              |          | EntitlementAttribValue                         | N | Value of the attribute.  Required if:  NoEntitlementAttrib (1777) > 0  |  |  |
| $\rightarrow$ | $\rightarrow$         | End Component Block |          |  |   |  |  |  |
| $\rightarrow$ | →                     | 1776                |          | 1776 EntitlementID                             |   | Unique identifier for a specific NoElements (1773) repeating group instance.   |  |  |
| $\rightarrow$ | $\rightarrow$         | Comp                | onent Bl | ock <instrumentscopegrp></instrumentscopegrp>  |   |  |  |  |
| $\rightarrow$ | $\rightarrow$         | 16                  | 656      | NoInstrumentScopes                             | N | Always 1   |  |  |
| $\rightarrow$ | ÷                     | ÷                   | 1535     | InstrumentScopeOperator                        | N | Operator to perform on the instrument(s) specified:  1 = Include   |  |  |
| $\rightarrow$ | $\rightarrow$         | $\rightarrow$       | Compo    | nent Block <instrumentscope></instrumentscope> |   |  |  |  |
| $\rightarrow$ | ÷                     | ÷                   | 1538     | InstrumentScopeSecurityID                      | N | Security Identifier for which<br>Liquidity Provider is<br>entitled to.   |  |  |
| $\rightarrow$ | $\rightarrow$         | $\rightarrow$       | 1539     | InstrumentScopeSecurityIDSource                | N | Specified Security Identifier source   |  |  |
| $\rightarrow$ | $\rightarrow$         | $\rightarrow$       | 1616     | InstrumentScopeSecurityExchange                | N | Specified Security exchange  |  |  |
| $\rightarrow$ | $\rightarrow$         | $\rightarrow$       | End Co   | mponent Block                                  |   |  |  |  |
| $\rightarrow$ | $\rightarrow$         | End C               | ompone   | nt Block                                       |   |  |  |  |
| $\rightarrow$ | → End Component Block |                     |          |  |   |  |  |  |
| End C         | ompone                | ent Bloc            | ck       |  |   |  |  |  |
| Mess          | Message Trailer       |                     |          |  |   |  |  |  |



#### 7.11 Infrastructure

#### 7.11.1 Business Message Reject (j)

This message can be initiated by the OCG-C.

| FIX Tag | Field Name           | Required? | Description   |
|---------|----------------------|-----------|---|
| Message | <u>Header</u>        |           |   |
| 35      | MsgType              | Υ         | j= Business Message Reject  |
| Message | Body                 |           |   |
| 45      | RefSeqNum            | N         | Sequence number of the message which caused the rejection   |
| 372     | RefMsgType           | Υ         | Message type of the rejected message.   |
| 379     | BusinessRejectRefID  | N         | The value of the business-level "ID" field on the message being referenced.   |
| 380     | BusinessRejectReason | Y         | Code specifying the reason for the rejection of the message:  O = Other  1 = Unknown ID  2 = Unknown Security  3 = Unspecified Message Type  4 = Application not available  5 = Conditionally required field missing  8 = Throttle limit exceeded |
| 58      | Text                 | N         | Where possible, message to explain reason for rejection In case the BusinessRejectReason (380) = 8 (Throttle Limit Exceeded), the Text (58) field will indicate the remaining throttle interval time in milliseconds.                             |
| Message | <u>Trailer</u>       |           |   |

# 7.11.2 User Request (BE)

The User Request messages can be used by the client to request for throttle entitlement details for this requesting client.

| FIX Tag      | Field Name      | Required? | Description   |  |  |
|--------------|-----------------|-----------|---|--|--|
| Message      | <u>Header</u>   |           |   |  |  |
| 35           | MsgType         | Υ         | BE= User Request  |  |  |
| Message Body |                 |           |   |  |  |
| 923          | UserRequestID   | Υ         | Client assigned identifier for this request                 |  |  |
| 924          | UserRequestType | Y         | Indicates the action required: ■ 5 = Request Throttle Limit |  |  |
| 553          | UserName        | Υ         | Same as SenderCompID  |  |  |
| Message      | <u>Trailer</u>  |           |   |  |  |



# 7.11.3 User Response (BF)

The User Response message is used by the OCG-C as a response to a User Request to provide throttle entitlement details for the requesting client.

| FI            | X Tag     | Field Name                  | Required? | Description  |
|---------------|-----------|-----------------------------|-----------|--|
| Me            | ssage He  | ader_                       |           |  |
|               | 35        | MsgType                     | Υ         | BF= User Response  |
| Me            | ssage Bo  | dy                          |           |  |
|               | 923       | UserRequestID               | Υ         | Client assigned identifier for the User Request  |
|               | 553       | UserName                    | Υ         | As provided in 35=BE   |
| Com           | ponent B  | lock < Throttle Params Grp> |           |  |
| 1             | 1610      | NoThrottles                 | N         | Throttle information to follow   |
| $\rightarrow$ | 1611      | ThrottleAction              | N         | Action to be taken should throttle limit be exceeded:  2 = Reject  |
| $\rightarrow$ | 1612      | ThrottleType                | N         | Type of throttle:  • 0 = Inbound Rate (Absolute throttle rate)   |
| $\rightarrow$ | 1613      | ThrottleNoMsgs              | N         | The maximum number of messages allowed by the throttle.  Can be used only when ThrottleType (1612) = Inbound Rate.  Indicates, along with ThrottleTimeUnit (1614), the interval of time in which ThrottleNoMsgs (1613) may be sent.  Default is 1. |
| →             | 1614      | ThrottleTimeInterval        | N         | Indicates the interval of time in which the Throttle No Messages may be sent based on the Throttle Time Unit specified.  Default Seconds Required if:  ThrottleType (1612) = 0 (Inbound Rate)  |
| <b>→</b>      | 1615      | ThrottleTimeUnit            | N         | Indicates the unit in which Throttle Time Interval is expressed:  • 0 = Seconds(default if not specified)  Required if:  Throttle Type = 0 (Inbound Rate)  |
| End           | Compone   | ent Block                   |           |  |
| Me            | ssage Tra | <u>ailer</u>                |           |  |

# 8. Data Dictionary

### 8.1 Session Level

| Tag | Field Name  | Data Type | Description   | Comments |
|-----|-------------|-----------|---|----------|
| 7   | BeginSeqNo  | SeqNum    | Sequence number of first message in range.  |          |
| 8   | BeginString | String    | Identifies beginning of new message and protocol version Valid values: FIXT.1.1                             |          |
| 9   | BodyLength  | Length    | Number of characters after this field up to and including the delimiter immediately preceding the CheckSum. |          |
| 10  | CheckSum    | String    | Three byte, simple checksum. Always the last field in message   |          |
| 16  | EndSeqNo    | SeqNum    | Sequence number of last message in range  |          |
| 34  | MsgSeqNum   | SeqNum    | Sequence number of the message.   |          |

| 35 | MsgType      | String       | <ul> <li>0 = Heartbeat</li> <li>1 = Test Request</li> <li>2 = Resend Request</li> <li>3 = Reject</li> <li>4 = Sequence Reset</li> <li>5 = Logout</li> <li>8 = Execution Report</li> <li>9 = Order Cancel Reject</li> <li>A = Logon</li> <li>D = New Order - Single</li> <li>F = Order Cancel Request</li> <li>G = Order Cancel/Replace Request</li> <li>q = Order Mass Cancel Request</li> <li>r = Order Mass Cancel Report</li> <li>S = Quote</li> <li>Z = Quote Cancel</li> <li>AE = Trade Capture Report</li> <li>AI = Quote Status Report</li> <li>AR = Trade Capture Report Ack</li> <li>BE = User Request</li> <li>BF = User Response</li> <li>CU = Party Entitlement Request</li> <li>CV = Party Entitlement Report</li> </ul> |                                  |
|----|--------------|--------------|---|----------------------------------|
| 36 | NewSeqNo     | SeqNum       | Sequence number of the next message to be transmitted.  |                                  |
| 43 | PossDupFlag  | Boolean      | Whether the message was previously transmitted under<br>the same MsgSeqNum (34).<br>Absence of this field is interpreted as Original<br>Transmission (N).   |                                  |
| 45 | RefSeqNum    | SeqNum       | Sequence number of the rejected message.  |                                  |
| 49 | SenderCompID | String       | Comp ID of the party sending the message.   | Limited to maximum 11 characters |
| 52 | SendingTime  | UTCTimestamp | Time the message was transmitted. Format: YYYYMMDD-HH:MM:SS.ssssss  |                                  |

| 56  | TargetCompID    | String       | Comp ID of the party the message is sent to   | Limited to maximum 11 characters |
|-----|-----------------|--------------|---|----------------------------------|
| 97  | PossResend      | Boolean      | Whether the message was previously transmitted under a different MsgSeqNum (34).  Absence of this field is interpreted as Original Transmission (N).  |                                  |
| 98  | EncryptMethod   | Int          | Method of encryption  |                                  |
| 108 | HeartBtInt      | Int          | Indicates the heartbeat interval in seconds.  |                                  |
| 112 | TestReqID       | String       | Required if the heartbeat is a response to a Test Request. The value in this field should echo the TestReqID (112) received in the Test Request.  Identifier for the request  |                                  |
| 122 | OrigSendingTime | UTCTimestamp | Time the message was originally transmitted.  If the original time is not available, this should be the same value as SendingTime (52).  Required if  PossDupFlag (43) is Possible Duplicate (Y).  Format: YYYYMMDD-HH:MM:SS.ssssss |                                  |
| 123 | GapFillFlag     | Boolean      | Mode in which the message is being used.  Absence of this field is interpreted as Sequence Reset (N).   |                                  |
| 371 | RefTagID        | Int          | If a message is rejected due to an issue with a particular field its tag number will be indicated.  |                                  |
| 372 | RefMsgType      | String       | Message type of the rejected message.   |                                  |

| 373 | SessionRejectReason   | Int     | Code specifying the reason for the reject:  0 = Invalid Tag Number  1 = Required Tag Missing  2 = Tag not defined for this message  3 = Undefined tag  4 = Tag specified without a value  5 = Value is incorrect (out of range) for this tag  6 = Incorrect data format for value  9 = CompID problem  10 = Sending Time Accuracy problem  11 = Invalid Msg Type  13 = Tag appears more than once  15 = Repeating group fields out of order  16 = Incorrect NumInGroup count for repeating group  18 = Invalid/Unsupported Application Version  99 = Other |  |
|-----|-----------------------|---------|--|--|
| 380 | BusinessRejectReason  | Int     | Code specifying the reason for the rejection of the business message  O = Other  1 = Unknown ID  2 = Unknown Security  3 = Unspecified Message Type  4 = Application not available  5 = Conditionally required field missing  8 = Throttle Limit exceeded  |  |
| 464 | TestMessageIndicator  | Boolean | Used to specify that this FIX session will be sending and receiving "test" vs. "production" messages  Only applicable for Logon (35=A) message from the OCG-C to the client  |  |
| 554 | Password              | String  | Password assigned to the Comp ID. Required if the message is generated by the client.  |  |
| 789 | NextExpectedMsgSeqNum | SeqNum  | Next expected MsgSeqNum value to be received   |  |

| 925  | NewPassword             | String | New password for the Comp ID.  |  |
|------|-------------------------|--------|--|--|
| 1128 | ApplVerID               | String | Version of FIX used in the message.  |  |
|      |                         |        | Required if the message is generated by the OCG-C.   |  |
| 1137 | DefaultApplVerID        | String | Default version of FIX messages used in this session.  |  |
| 1400 | EncryptedPasswordMethod | Int    | Enumeration defining the encryption method used to encrypt password fields:  101 = RSA   |  |
| 1402 | EncryptedPassword       | Data   | Encrypted password – encrypted via the method specified in EncryptedPasswordMethod (1400). Padding scheme supported is PKCS #1 or OAEP.  |  |
| 1404 | EncryptedNewPassword    | Data   | Encrypted new password – encrypted via the method specified in EncryptedPasswordMethod (1400). Padding scheme supported is PKCS #1 or OAEP.  |  |
| 1409 | SessionStatus           | Int    | Status of the FIX session. Required if the message is generated by the server.  • 0 = Session active • 1 = Session password changed • 2 = Session password due to expire • 3 = New session password does not comply with the policy • 4 = Session logout complete • 5 = Invalid username or password • 6 = Account locked • 7 = Logons are not allowed at this time • 8 = Password expired • 100 = Password change is required • 101 = Other |  |

# 8.2 Business Level

| Tag | Field Name       | Data Type         | Description   | Comments                         |
|-----|------------------|-------------------|---|----------------------------------|
| 11  | ClOrdID          | String            | Unique identifier of the order as assigned by the client  | Limited to maximum 8 digits      |
| 14  | CumQty           | Qty               | Total quantity filled   |                                  |
| 17  | ExecID           | String            | Unique Execution ID assigned by the system for each Execution Report generated  |                                  |
| 18  | ExecInst         | MultipleCharValue | <ul> <li>c = Ignore Price Validity Checks</li> <li>x = Ignore Notional Validity Checks</li> <li>Instructions for order handling on exchange trading floor.</li> <li>Absence of this field is interpreted as None</li> </ul> |                                  |
| 19  | ExecRefID        | String            | Reference identifier used with Trade and Trade Cancel execution types   |                                  |
| 22  | SecurityIDSource | String            | Identifier of the source of the SecurityID (48) value.  |                                  |
| 31  | LastPx           | Price             | Price of this fill. Execution price   |                                  |
| 32  | LastQty          | Qty               | Quantity executed in this fill. Execution size  |                                  |
| 37  | OrderID          | String            | Unique identifier for Order as assigned by the server   | Limited to maximum 20 characters |
| 38  | OrderQty         | Qty               | Total order quantity.   |                                  |
| 39  | OrdStatus        | Char              | Current status of the order:  0 = New 1 = Partially filled 2 = Filled 4 = Cancelled 6 = Pending Cancel 8 = Rejected A = Pending New C = Expired E = Pending Replace   |                                  |

| 40 | OrdType        | Char         | Type of the order:  1 = Market 2 = Limit   |                                  |
|----|----------------|--------------|--|----------------------------------|
| 41 | OrigClOrdID    | String       | ClOrdID (11) of the previous order (NOT the initial order of the day) as assigned by the client, used to identify the previous order in cancel and cancel/replace requests | Limited to maximum 8 digits      |
| 44 | Price          | Price        | Limit price of the order   |                                  |
| 48 | SecurityID     | String       | Identifier of the instrument.  | Limited to maximum 20 characters |
| 54 | Side           | Char         | Side of the order:  1 = Buy 2 = Sell 5 = Sell short  |                                  |
| 58 | Text           | String       | Free format text string  | Limited to maximum 50 characters |
| 59 | TimeInForce    | Char         | Specifies how long the order remains in effect:  Absent = Day  O = Day  3 = IOC  4 = FOK  9 = At Crossing  |                                  |
| 60 | TransactTime   | UTCTimestamp | Time qualifier of the order Format: YYYYMMDD-HH:MM:SS.sss <u>sss</u>   |                                  |
| 77 | PositionEffect | Char         | Indicates whether the resulting position after a trade should be an opening position or closing position:  • C = Close   |                                  |

| 102 | CxlRejReason | Int   | Code to identify reason for cancel rejection  O = Too late to cancel  1 = Unknown Order  3 = Order already in Pending Cancel or Pending Replace status  6 = Duplicate ClOrdID (11) received  8 = Price exceeds current price band  99 = Other  100 = Reference price is not available  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band  103 = Notional value exceeds threshold |  |
|-----|--------------|-------|--|--|
| 103 | OrdRejReason | Int   | Code to identify reason for order rejection  3 = Order exceed limit  6 = Duplicate order  13 = Incorrect Qty  16 = Price exceeds current price band  19 = Reference price is not available  20 = Notional value exceeds threshold  99 = Other  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band   |  |
| 132 | BidPx        | Price | Bid Price  |  |
| 133 | OfferPx      | Price | Offer price  |  |
| 134 | BidSize      | Qty   | Quantity of bid  |  |
| 135 | OfferSize    | Qty   | Quantity of offer  |  |

| 150 | ЕхесТуре          | Char       | Describes the specific Execution report  O = New  S = Rejected  C = Expired  F = Trade  H = Trade Cancel  4 = Cancelled  5 = Replaced  L = Triggered or activated by system   |  |
|-----|-------------------|------------|---|--|
| 151 | LeavesQty         | Qty        | Quantity open for further execution   |  |
| 207 | SecurityExchange  | Exchange   | Market used to help identify a security. Valid values   |  |
| 295 | NoQuoteEntries    | NumInGroup | The number of securities (instruments) for which quotes are to be cancelled.  |  |
| 297 | QuoteStatus       | Int        | Identifies the status of the quote acknowledgement:  5 = Rejected   |  |
| 298 | QuoteCancelType   | Int        | Identifies the type of quote cancel:  1 = Cancel for one or more securities   |  |
| 300 | QuoteRejectReason | Int        | Reason Quote was rejected  8 = Invalid Price  10 = Price exceeds current price band  14 = Notional value exceed threshold  16 = Reference Price is not available  99 = Other  101 = Price exceeds current price band (override not allowed)  102 = Price exceeds current price band |  |

| 378 | ExecRestatementReason | Int        | Code to identify reason for an Execution Report message sent when communicating an unsolicited cancel:  6 = Cancel on Trading Halt/VCM  8 = Market (Exchange) Option  100 = Unsolicited Cancel  101 = On Behalf Of Single Cancel  102 = On Behalf Of Mass Cancel  103 = Mass Cancelled by the Broker  104 = Cancel on Disconnect  105 = Cancel due to Broker suspension  106 = Cancel due to Exchange Participant suspension  107 = System Cancel |                             |
|-----|-----------------------|------------|---|-----------------------------|
| 379 | BusinessRejectRefID   | String     | The value of the business-level "ID" field on the message being referenced.   |                             |
| 390 | BidID                 | String     | Unique identifier for Bid side of the quote   | Limited to maximum 8 digits |
| 434 | CxlRejResponseTo      | Char       | Identifies the type of request that a Cancel Reject is in response to:  1 = Order Cancel Request 2 = Order Cancel/Replace Request   |                             |
| 447 | PartyIDSource         | Char       | Identifies class or source of the PartyID (448) value.  |                             |
| 448 | PartyID               | String     | Party identifier/code   |                             |
| 452 | PartyRole             | Int        | Identifies the type or role of the PartyID (448) specified  |                             |
| 453 | NoPartyIDs            | NumInGroup | Number of PartyID   |                             |
| 487 | TradeReportTransType  | Int        | <ul> <li>Identifies Trade Report message transaction type:</li> <li>0 = New</li> <li>2 = Replace</li> <li>5 = Cancel due to back out of trade.</li> </ul>   |                             |
| 528 | OrderCapacity         | Char       | Designates the capacity of the firm placing the order:  • A = Agency • P = Principal  |                             |

| 529 | OrderRestrictions      | MultipleChar | Restrictions associated with an order:  2 = Index Arbitrage  5 = Acting As Market Maker Or Specialist In Security  6 = Acting As Market Maker Or Specialist In Underlying of a derivative security  The above 3 values are applicable only if Side = 5 (Sell Short) |                                  |
|-----|------------------------|--------------|---|----------------------------------|
| 530 | MassCancelRequestType  | Char         | <ul> <li>Specifies scope of Order Mass Cancel Request:</li> <li>1 = Cancel Orders For Security</li> <li>7 = Cancel All Orders</li> <li>9 = Cancel Orders for a Market segment</li> </ul>  |                                  |
| 531 | MassCancelResponseType | Char         | Indicates the action taken by the order handling system as a result of the cancel request.  O = Cancel Request Rejected  1 = Cancel order for a security  7 = Cancel All Orders  9 = Cancel all orders for a market segment   |                                  |
| 532 | MassCancelRejectReason | Int          | The code Indicating the reason why the Mass Cancel Request was rejected:  8 = Invalid or Unknown Market Segment(8)  99 = Other Required if: Mass Cancel Response = Mass Cancel Request Rejected   |                                  |
| 537 | QuoteType              | Int          | Identifies the type of quote: ■ 1 = Tradable  |                                  |
| 552 | NoSides                | NumINGroup   | Number of Side repeating group instances  |                                  |
| 553 | UserName               | String       | User id or username   | Limited to maximum 49 characters |
| 571 | TradeReportID          | String       | Unique identifier of trade capture report   |                                  |

| 574 | MatchType               | String     | The point in the matching process at which this trade was matched:  4 = Auto Match 5 = Cross Auction   |
|-----|-------------------------|------------|--|
| 576 | NoClearingInstructions  | NumINGroup | Number of clearing instructions  |
| 577 | ClearingInstruction     | Int        | Clearing Information:  0 = Process normally  1 = Exclude from all netting  14 = Buy In   |
| 751 | TradeReportRejectReason | Int        | Reason Trade Capture Request was rejected  4 = Invalid trade type  5 = Price exceeds current price band  6 = Reference price not available  7 = Notional value exceeds threshold  99 = Other |
| 828 | TrdType                 | Int        | Type of the trade being reported:  4 = Late Trade  22 = Privately Negotiated Trade  102 = Odd Lot Trade  104 = Overseas Trade  |
| 856 | TradeReportType         | Int        | Type of the Trade Report:  0 = Submit 4 = Addendum 6 = Trade Report Cancel   |
| 880 | TrdMatchID              | String     | Identifier assigned to a trade by the matching system  |
| 893 | LastFragment            | Boolean    | Indicates whether this message is the last in a sequence of messages.  |
| 923 | UserRequestID           | String     | Unique identifier for a User Request   |
| 924 | UserRequestType         | Int        | Indicates the action required by a User Request Message  |
|     |                         |            |  |

| 939         | TrdRptStatus       | Int            | Trade Report Status:  0 = Accepted  1 = Rejected  Absence of this field indicates 0 = Accepted   |                                  |
|-------------|--------------------|----------------|--|----------------------------------|
| 1003        | TradeID            | String         | The unique ID assigned to the trade entity once it is received or matched by the server  | Limited to maximum 24 characters |
| <u>1057</u> | AggressorIndicator | <u>Boolean</u> | Used to identify whether the order initiator is an aggressor or not in the auto-matched trade during continuous trading session:  Y = Order initiator is aggressor  N = Order initiator is passive |                                  |
| 1090        | MaxPriceLevels     | Int            | Allows an order to specify a maximum number of price levels to trade through   |                                  |
| 1093        | LotType            | Char           | Defines the lot type assigned to the order:  1 = Odd Lot 2 = Round Lot   |                                  |
| 1115        | OrderCategory      | Char           | Defines the type of interest behind a trade:  • A = Internal Cross Order   |                                  |
| 1123        | TradeHandlingInstr | Char           | Indicates how the trade capture report should be handled by the receiver:  0 = Trade Confirm 1 = Two Party Report 6 = One Party Report   |                                  |
| 1166        | QuoteMsgID         | String         | Client specified identifier for the Quote Cancel message   | Limited to maximum 8 digits      |
| 1300        | MarketSegmentID    | String         | Identifies the market segment  |                                  |
| 1328        | RejectText         | String         | Rejection text   |                                  |
| 1369        | MassActionReportID | String         | Unique identifier of Order Mass Cancel Report  |                                  |

| 1511 | RequestResult                   | Int        | Conditionally required if the Party Entitlement Report is in response to a Party Entitlements Request:  O = Valid Request  1 = Invalid or unsupported request  2 = No data found that match selection criteria  3 = Not authorized to retrieve data  4 = Data temporarily unavailable  5 = Request for data not supported  99 = Other |  |
|------|---------------------------------|------------|---|--|
| 1512 | TotNoPartyList                  | Int        | Total broker lds to be returned   |  |
| 1535 | InstrumentScopeOperator         | Int        | Operator to perform on the instrument(s) specified:  1 = Include  |  |
| 1538 | InstrumentScopeSecurityID       | String     | Security Identifier for which LP is entitled to   |  |
| 1539 | InstrumentScopeSecurityIDSource | String     | Specified Security Idenfier source  |  |
| 1610 | NoThrottles                     | NumInGroup | Number of Throttle to follow  |  |
| 1611 | ThrottleAction                  | Int        | Action to be taken once the throttle limit is exceeded:  2 = Reject   |  |
| 1612 | ThrottleType                    | Int        | Type of throttle: ■ 0 = Inbound Rate  |  |
| 1613 | ThrottleNoMsgs                  | Int        | Maximum Number of messages allowed by the throttle  |  |
| 1614 | ThrottleTimeInterval            | Int        | Indicates, along with ThrottleTimeUnit, the interval of time in which ThrottleNoMsgs may be sent.  Can be used only when ThrottleType = Inbound Rate.   |  |
| 1615 | ThrottleTimeUnit                | Int        | Indicates, along with ThrottleTimeUnit, the interval of time in which ThrottleNoMsgs may be sent:  0 = Seconds  Can be used only when ThrottleType = Inbound Rate.  |  |
| 1616 | InstrumentScopeSecurityExchange | Exchange   | Specified Security exchange   |  |

| 1656 | NoInstrumentScopes    | NumInGroup | Number of instrument scopes included   |  |
|------|-----------------------|------------|--|--|
| 1671 | NoPartyDetails        | NumInGroup | Number of party details  |  |
| 1691 | PartyDetailID         | String     | The identification of the party. Required when NoPartyDetails (1671) > 0                                       |  |
| 1692 | PartyDetailIDSource   | Char       | Source of the identifier of the PartyDetailID (1691) specified.  |  |
| 1693 | PartyDetailRole       | Int        | Identifies the type or role of PartyDetailID (1691) specified  |  |
| 1770 | EntitlementsRequestID | String     | EntitlementsRequestID of the PartyEntitlementRequest message the response is to                                |  |
| 1771 | EntitlementsReportID  | String     | Unique identifier for PartyEntitlementReport   |  |
| 1772 | NoPartyEntitlements   | NumINGroup | Number of party entitlement values   |  |
| 1773 | NoEntitlements        | NumINGroup | Number of entitlement values   |  |
| 1774 | EntitlementIndicator  | Bool       | Determines if the party is entitled:  ■ Y= Entitled  ■ N= Not Entitled  Required if:  NoEntitlements(1773) >0. |  |
| 1775 | EntitlementType       | Int        | Absence of this field indicates that the entitlement is implicit:  0 = Trade 1= Market Maker                   |  |
| 1776 | EntitlementID         | String     | Unique identifier for specific a specific NoElements (1773) repeating group instance                           |  |
| 1777 | NoEntitlementAttrib   | Int        | Number of entitlement attributes   |  |

| 1778 | EntitlementAttribType     | int        | Name of the attribute:  ■ 4000 = Minimum Quote obligation  ■ 4001 = Maximum Quote Spread obligation  Required if:  NoEntitlementAttrib(1777) > 0. |                             |
|------|---------------------------|------------|---|-----------------------------|
| 1779 | EntitlementAttribDataType | Int        | Data type of the entitlement attribute :  7 = Qty   |                             |
| 1780 | EntitlementAttribValue    | String     | Value of the entitlement attribute  Required if:  NoEntitlementAttrib(1777) > 0.  |                             |
| 1812 | NoDisclosureInstructions  | NumINGroup | No of Disclosure Instructions   |                             |
| 1813 | DisclosureType            | Int        | Information subject to disclosure:  100 = None  |                             |
| 1814 | DisclosureInstruction     | Int        | Instruction to disclose information or to use default values of the receiver:  1 = Yes  |                             |
| 1867 | OfferID                   | String     | Unique identifier for the Offer side of the quote assigned by the quote issuer  | Limited to maximum 8 digits |
| 1868 | NoValueChecks             | NumInGroup | Number of value check entries   |                             |
| 1869 | ValueCheckType            | Int        | Type of value to be checked:  ■ 1 = Price Check  ■ 2 = Notional Value Check  Required if:  NoValueChecks (1868) > 0                               |                             |

| 1870 | ValueCheckAction  | Int  | Identifies if the type of value specified in the ValueCheckType is required or not:  • 0 = Do not check • 1 = Check  Required if:  NoValueChecks (1868) > 0   |
|------|-------------------|------|---|
| 5681 | ExchangeTradeType | Char | Exchange assigned trade type for a reported trade:  M = Manual Trade  S = Manual Non Standard price  Q = Special Lot  P = Odd Lot  R = Previous Day  V = Overseas  E = Special Lot – Semi-Automatic  O = Odd Lot – Semi-Automatic |

# **Appendices**

# A. Password Policy

- Length is 8 characters.
- Must comprise of a mix of alphabets (A-Z and a-z) and digits (0-9)
- Must be changed on first-time logon or first logon after reset from HKEX market operations.
- New password can't be one of the previous 5 passwords.
- Can't be changed more than once per day.
- Session will be locked after 3 consecutive invalid passwords
- Expires every 90 days.