

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

FIX Drop Copy Protocol

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1. Document Control

1.1 Change History

Version Number	Issue Date	Section Number	Status
1.0	31 October 2012	All	First Version
1.1	21 December 2012	 3.2 - Comp ID of HKEX 3.6 - Password Policy 6.5 - Board Lot Order Handling 7.7.1 - Order Accepted 7.7.3 - Execution Report - Order Cancelled (Unsolicited) 7.7.7 - Board Lot/Odd Lot Trade Cancelled 7.8.1 - Trade Accepted 7.8.2 - Trade Cancelled 8 - Data Dictionary Appendix A - Password Policy 	Revised Version
1.2	25 March 2013	 3.4 – Encryption 7 – Message Definitions 8.2 – Data Dictionary. 	Minor Revisions
1.3	28 June 2013	 3.6 - Change Password 6.7 - Odd Lot Order Handling 7.7.6 - Auto-matched Trade (Order Executed) Inclusion of TrdMatchID(880) 7.7.7 - Auto-matched Trade Cancellation (Executed Trade Cancelled) 7.9 - Business Messages - Semi-Auto Matched Trade 7.10.1 - Business Message Reject (j) 8.2 - Business Level 	Revised Version
1.4	2 December 2013	 Clarification of message fields and message handling: Section 3.4 – Encryption Section 7 – Message Definitions Section 8 – Data Dictionary 	Revised Version
1.5	20 June 2014	 6.7 – Odd lot/Special lot Order Handling 6.12 – Cancelled Semi-Auto Matched Trades 7.7.8 – Trade (Odd lot/Special lot Order Executed) 7.7.9 – Trade (Semi-Auto-matched) Cancelled 7.9 – Business Messages - Semi-Auto Matched Trade 	Revised Version
1.6	23 July 2015	Update (description only) for AMS Volatility Control Mechanism (VCM):	Revised Version



Version Number	Issue Date	Section Number	Status
		 7.7.3 – Order Cancelled – Unsolicited 8.2 – Business Level 	
2.0	12 January 2017	Update for OTP-C	Revised Version
2.1	12 July 2017	7.7.3 Order Cancelled – Unsolicited Keep same message format as for AMS (no RejectText(1328) field).	Revised Version
2.2	29 June 2018	 6.15 Session Contents Update for the obsolescence of terminal and OG devices. 	Revised Version
3.0	28 December 2020	 Update for CMG migration: Global terminology change of OCG to CMG Support RSA Padding scheme OAEP for password encryption in the Logon message 	Revised Version
3.0	11 February 2021	Update for Section 4.7 Fault Tolerance	Revised Version
3.1	13 August 2021	 Provide Aggressive/Passive Indicator for auto-matched trades Increase the transaction time precision to microsecond 	Revised Version
3.1	23 September 2021	• Change the name CMG to OCG-C	Revised Version
3.2	19 July 2023	Add Self-matching Prevention (SMP) functionality	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 an application level interface to HKEX securities trading system ("OTP-C") for drop copy purpose.

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 (a unique session identifier) 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.

CompID of the OCG-C, as set for TargetCompID of the client initiated messages & SenderCompID of the OCG-C initiated messages is "HKEXCC".

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 (<u>http://en.wikipedia.org/wiki/RSA (algorithm</u>)) 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 (<u>http://en.wikipedia.org/wiki/Base64</u>) 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>Appendix 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 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 that 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 FIX gateway 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 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. 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 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 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.

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 and the message will be processed without considering the value in the PossResend (97) field.

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
- 6. Sequence Reset

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



5.7 Transmission of Missed Messages

The Execution Report & Trade Capture Reports 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, all such messages 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).

6.3 Party Identification

Party Identification is defined as follows:

ID	Description	FIX Tag and Value
Broker ID	Identifier of the member the interest is submitted under	PartyRole (452)=1 and 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 PartyID (448)
Contra Broker ID	Identifier of the Contra member the interest is submitted under	PartyRole (452)=17 and PartyID (448)
BS User ID The location ID of the member as referred to by Broker ID or Submitting Broker ID		PartyRole (452)=75 and PartyID (448)

6.4 Client Order ID

In a drop copy message ClOrdID (11) field will be provided only if the original message submitted through the Trading interface had this field. The same rule is applicable to OrigClOrdID (41).

6.5 Board Lot Order Handling

Order book updates such as new board (i.e., round) lot orders, board lot order cancels, board lot order amends, resultant trades, trade cancels etc. will be published to the drop copy clients using Execution Report (35=8)message.

For Non-CG originated Order Cancel/Replace:

- Drop Copy will send two execution reports, one for the cancellation of the original order followed by the acknowledgement of the Replaced Order (if applicable).
- The Cancellation due to Cancel/Replace will be treated as an Unsolicited Cancellation (Exec Restatement Reason = 100)
- In the Execution Report sent for the acknowledgment of the Replaced order, the cumulative quantity will be specified as 0 and order quantity and leaves quantity will be equal to the open order quantity at the market due to the amend request.
- In a case where the Replaced order is rejected, only the cancellation of the original order will be reported to the drop copy client

6.6 Quote Handling



The Execution Report (35=8) message is used to notify the drop copy client if a quote is accepted, or updated, cancelled or executed; each side (54) within a quote is considered as a board (i.e., round) lot order.

6.7 Odd Lot/Special Lot Order Handling

Order book updates such as new odd lot/special lot orders & odd lot/special lot order cancels will be published to the drop copy clients using Execution Report (35=8) message.

Trades concluded through semi-automatic trading & related trade cancels will also be published to the drop copy client.

In general, the OCG-C uses the following approach for sending the odd lot/special lot trading related messages:

Business Scenario	Odd lot/Special Lot Broker	d lot/Special Lot Order Submitting ker		Trade Reporting Broker	
	is a Non-OCG-C session broker	is a OCG-C session broker	is a Non-OCG-C session broker	is a OCG-C session broker	
Odd lot/Special lot New Order – Confirmation	Execution Report (35=8)	Execution Report (35=8)	N/A		
Odd lot/Special lot Cancel – Confirmation	Execution Report (35=8)	Execution Report (35=8)	N/A		
Odd lot/Special lot Trade – Accepted	Trade Capture Report (35=AE)	Execution Report (35=8)	Trade Capture Report (35=AE)	Trade Capture Report (35=AE)	
Odd lot/Special lot Trade – Cancelled	Trade Capture Report (35=AE)	Execution Report (35=8)	Trade Capture Report (35=AE)	Trade Capture Report (35=AE)	

6.8 Trade Report Handling

Trade Capture Report (35=AE) message is used to notify the drop copy client when an offexchange trade is reported or an already reported off-exchange trade is cancelled successfully.

6.9 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.

6.10 Execution Reports

The Execution Report (35=8) message is used to communicate many different events to the drop copy 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
C = Expired	Order Expired Indicates that an order has been expired.	 C = Expired



ExecType (150)	Description	OrdStatus (39)
	OrigClOrdID field will not be provided in this Execution Report.	
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.	 1 = Partially Filled 2 = Filled
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 Request has been accepted and successfully processed.	 0 = New 1 = Partially Filled 2 = Filled
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).	 0 = New 1 = Partially Filled 2 = Filled 4 = Cancelled C = Expired

6.11 Cancelled 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.

6.12 Cancelled Semi-Auto Matched Trades

A semi-auto matched trade (i.e., odd lot/special trade) already concluded for an odd lot/special lot order could be cancelled by the HKEX Market Operations. A trade cancel will be communicated to the drop copy client by providing the ExecRefID (19) in order to identify the particular trade which is being cancelled.

6.13 Message Rejection

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) and Business Message Reject (35=j) from the OCG-C.

6.14 Copy Message Indicator

CopyMsgIndicator (797) field will be set to Y = Yes for each message sent through the drop copy sessions in order to indicate that the given message is a drop copy of another message.

6.15 Session Contents

A drop copy connection is configured to receive a copy of all the Execution Reports (35=8) and Trade Capture Reports (35=AE) generated for the Broker ID(s) assigned to the drop copy session, irrespective of the OCG-C Trading Session used by the given Broker ID for trading. However, any rejection message related to order, order cancel, order cancel/replace, quote or trade capture report will not be part of the drop copy.

The drop copy client may have the privilege to subscribe to one of the following drop copy options:

Trades Only

Under 'Trades only' option, the client will have access to Execution Reports related to auto-matched trades, Trade Capture reports and Odd-lot trades.

Orders & Trades

Under 'Orders & Trades' option, the client will have access to all order (board and oddlot), quote related Execution Reports and Trade Capture reports

A drop copy client must choose the required option when subscribing to the drop copy service with HKEX market operations. This option can't be changed intra-day.

The following table describes the contents for the two subscription options:

Business Message Type	Order and Trades Option	Trades Only Option		
Execution Report (35=8)				
Exec Type = New	\checkmark	х		
Exec Type = Expired	\checkmark	х		
Exec Type = Cancelled	\checkmark	х		
Exec Type = Replaced	\checkmark	х		
Exec Type = Trade	\checkmark	\checkmark		
Exec Type = Trade Cancel	\checkmark	\checkmark		
Trade Capture Report (35=AE)				
Trade Accepted	\checkmark	\checkmark		
Trade Cancelled	\checkmark	\checkmark		

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	A	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 Expired Order Cancelled Order Replaced Trade Trade Cancel
10.	Trade Capture Report	AE	Indicates one of the following:Trade SubmitTrade Cancel

7.2 In-bound Messages

Only Session-level messages are expected.

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. Trade Capture Report (35=AE)

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	Y	Always FIXT.1.1
9	BodyLength	Y	Number of bytes after this field up to and including the delimiter immediately preceding the CheckSum.
35	МѕдТуре	Y	Message type.
49	SenderCompID	Y	Comp ID of the party sending the message.
56	TargetCompID	Y	Comp ID of the party the message is sent to.
34	MsgSeqNum	Y	Sequence number of the message.
43	PossDupFlag	Ν	Indicates whether the message was previously transmitted under the same MsgSeqNum (34). Absence of this field is interpreted as original transmission (N).
97	PossResend	Ν	Indicates whether the message was previously transmitted under a different MsgSeqNum (34). Absence of this field is interpreted as original transmission (N).
52	SendingTime	Y	Time the message was transmitted.
122	OrigSendingTime	Ν	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).
1128	ApplVerID	Ν	 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	Y	Standard check sum described by FIX protocol. Always last field in the message; i.e. serves,

with the trailing <SOH>, as the end-ofmessage delimiter. 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	Y	A = Logon			
Message	Body					
98	EncryptMethod	Y	Method of encryption.0 = None/Other			
108	HeartBtInt	Y	Indicates the heartbeat interval in seconds.			
789	NextExpectedMsgSeqNum	Y	Next expected MsgSeqNum value to be received.			
1400	Encrypted Password Method	Ν	Enumeration defining the encryption method used to encrypt password fields: 101 = RSA			
1402	EncryptedPassword	Ν	Encrypted password – encrypted via the method specified in EncryptedPasswordMethod (1400). Padding scheme supported is PKCS #1 or OAEP.			
1404	EncryptedNewPassword	Ν	Encrypted new password – encrypted via the method specified in EncryptedPasswordMethod (1400). Padding scheme supported is PKCS #1 or OAEP.			
1409	SessionStatus	Ν	Status of the FIX session. Required if the message is generated by the OCG- C.			
1137	DefaultApplVerID	Y	Default version of FIX messages used in this session: 9 = FIX50SP2			
464	TestMessageIndicator	Ν	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	Ν	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	Trailer					

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

7.6.2 Logout (5)

FIX Tag	Field Name	Required?	Description			
Message	Message Header					
35	МѕдТуре	Y	5 = Logout			
Message	Message Body					
1409	SessionStatus	Ν	Status of the FIX session. Required if the message is generated by the OCG- C.			
58	Text	Ν	Textual reason for the logout.			
Message Trailer						

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

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	Y	0= Heartbeat			
Message	Body					
112	TestReqID	Ν	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	Trailer					

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 Header					
35	MsgType	Y	1= Test Request		
Message Body					
112	TestReqID	Y	Identifier included in Test Request message to be returned in resulting Heartbeat.		
Message	Trailer				

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 Header					
35	MsgType	Y	2= Resend Request		



Message Body					
7	BeginSeqNo	Y	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 Trailer					

7.6.6 Reject (3)

This message is initiated by the OCG-C.

FIX Tag	Field Name	Required?	Description		
Message	Message Header				
35	MsgType	Y	3= Reject		
Message	Body				
45	RefSeqNum	Y	Sequence number of the message which caused the rejection		
371	RefTagID	Ν	If a message is rejected due to an issue with a particular field its tag number will be indicated.		
372	RefMsgType	Ν	Message type of the rejected message.		
373	SessionRejectReason	Ν	 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	Ν	Text specifying the reason for the rejection.		
Message	Message Trailer				

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	<u>Header</u>		
35	MsgType	Y	4= Sequence Reset



Message Body					
36	NewSeqNo	Y	Sequence number of the next message to be transmitted.		
123	GapFillFlag	Ν	Mode in which the message is being used. Absence of this field is interpreted as Sequence Reset (N).		
Message Trailer					

7.7 Business Messages – Execution Reports (8)

7.7.1 Order Accepted

The OCG-C will send this execution report once a new order (board lot or odd lot/special lot) or a new quote has been accepted.

F	IX Tag	Field Name	Required?	Description		
Me	Message Header					
	35	MsgType	Y	8 = Execution Report		
Me	ssage Bo	dy				
	11	ClOrdID	Ν	Client specified identifier of the order.		
	37	OrderID	Y	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	Y	Number of party identifiers. The value in this field can be 1 or 2.		
÷	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/BS User ID.		
→	447	PartyldSource	Y	Defines the naming convention used in specifying the PartyID (448): D = Proprietary/Custom Code		
<i>→</i>	452	PartyRole	Y	 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	Y	Instrument identifier		
	22	SecurityIDSource	Y	 Identifies the source of the SecurityID (48): 8 = Exchange Symbol Required if: SecurityID (48) is specified 		
	207	SecurityExchange	Ν	The market which is used to identify the security:XHKGRequired if:		



SecurityIDSource	(22) = 8 (Exchange Symbol).	
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End Compone	ent Block		
40	OrdType	Ν	Order type applicable to the order: 1 = Market 2 = Limit
59	TimeInForce	Ν	 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	Y	Side of the order 1 = Buy 2 = Sell 5 = Sell Short
38	OrderQty	Ν	Total order quantity of the order
44	Price	Ν	Price of order. Required if: OrdType (40) = 2 (Limit).
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
529	OrderRestrictions	Ν	 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	Ν	Maximum number of price levels to trade through. Applicable if: Order Type (40) = 2 (Limit). If present, this should be set as 1.
2362	SelfMatchPreventionID	Ν	The identifier to prevent self-matching
77	PositionEffect	Ν	 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: • 0 = New



150	ЕхесТуре	Y	Execution Type that indicates the reason for the generation of the Execution Report: • 0 = New
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
58	Text	Ν	Free Text
1093	LotType	Ν	 Lot Type of the order: 1 = Odd Lot 2 = Round Lot Absence of this field indicates a Round (i.e., Board) Lot order.
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Tra	<u>iiler</u>		

7.7.2 Order Cancelled

The OCG-C sends this execution report once the request to cancel an order (board lot or odd lot/special lot) has been accepted.

FI	X Tag	Field Name	Required?	Description	
Mes	Message Header				
	35	MsgType	Y	8 = Execution Report	
Me	sage Bo	dy			
	11	ClOrdID	Ν	Client specified identifier of the order cancel request.	
	41	OrigClOrdID	Ν	Original client specified identifier for the incoming cancel request	
	37	OrderID	Y	Order ID as assigned by the exchange.	
	17	ExecID	Y	Unique Execution ID assigned for each Execution Report generated.	
Component Block <parties></parties>					
	453	NoPartyIDs	Y	Number of party identifiers. The value in this field can be 1 or 2.	
÷	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/BS User ID.	
÷	447	PartyldSource	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 the order) 75 = Location ID (BS User ID) 	
End	Compone	nt Block			



Component Bl	lock <instrument></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	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End Compone	nt Block		
40	OrdType	Ν	Order type applicable to the order: 1 = Market 2 = Limit
59	TimeInForce	Ν	 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	Y	Side of the order 1 = Buy 2 = Sell 5 = Sell Short
38	OrderQty	Ν	Total order quantity of the order
44	Price	Ν	Price of order. Required if: OrdType (40) = 2 (Limit).
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
529	OrderRestrictions	Ν	 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	Ν	Maximum number of price levels to trade through. Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.
77	PositionEffect	Ν	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	Y	Execution Type that indicates the reason for the generation of the Execution Report:4 = Cancelled
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
58	Text	Ν	Free Text
1093	LotType	Ν	 Lot Type of the order: 1 = Odd Lot 2 = Round Lot Absence of this field indicates a Round (i.e., Board) Lot order.
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Tra	iler		

7.7.3 Order Cancelled – Unsolicited

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

FI	X Tag	Field Name	Required?	Description
Mes	sage He	ader_		
	35	MsgType	Y	8 = Execution Report
Mes	Message Body			
	11	ClOrdID	Ν	Client specified identifier of the order.
	37	OrderID	Y	Order ID as assigned by the exchange.
	17	ExecID	Y	Unique Execution ID assigned for each Execution Report generated.
Com	ponent B	lock <parties></parties>		
	453	NoPartyIDs	Y	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: Broker ID/BS User ID.
<i>></i>	447	PartyldSource	Y	Defines the naming convention used in specifying the PartyID (448):D = Proprietary/Custom Code
\rightarrow	452	PartyRole	Y	Role of the specified PartyID (448):



			 1 = Executing Firm (Broker ID that submitted the order) 75 = Location ID (BS User ID)
End Compon	ent Block		
Component I	Block <instrument></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	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End Compon	ent Block		
40	OrdType	Ν	Order type applicable to the order: 1 = Market 2 = Limit
59	TimeInForce	Ν	 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	Y	Side of the order 1 = Buy 2 = Sell 5 = Sell Short
38	OrderQty	Ν	Total order quantity of the order
44	Price	N	Price of order. Required if: OrdType (40) = 2 (Limit).
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
529	OrderRestrictions	Ν	 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	Ν	Maximum number of price levels to trade through Applicable if:



			OrdType (40) = 2 (Limit).
			If present, this should be set as 1.
2362	SelfMatchPreventionID	Ν	The identifier to prevent self-matching
77	PositionEffect	Ν	 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	Y	Execution Type that indicates the reason for the generation of the Execution Report:4 = Cancelled
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
58	Text	Ν	Free Text
1093	LotType	Ν	 Lot Type of the order: 1 = Odd Lot 2 = Round Lot Absence of this field indicates a Round (i.e., Board) Lot order.
378	ExecRestatementReason	Ν	 Code to identify the reason for an Execution Report message with Exec Type= 4 (Cancel): 6 = Cancel on Trading Halt/VCM 8 = Market Operation 18 = Cancelled, self-match prevention aggressive order 19 = Cancelled, self-match prevention passive order 100 = Unsolicited Cancel for original order (for cancel/replace operation which fails market validation) 101 = OBO Single Order Cancel 102 = OBO Mass Order Cancel 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
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Tra	<u>iler</u>		

7.7.4 Order Expired

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

F	IX Tag	Field Name	Required?	Description
<u>Me</u>	ssage He	ader_		
	35	MsgType	Y	8 = Execution Report
Me	ssage Bo	dy		
	11	ClOrdID	Ν	Client specified identifier of the order.
	37	OrderID	Y	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	Y	Number of party identifiers. The value in this field can be 1 or 2.
÷	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/BS User ID.
→	447	PartyldSource	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 the order) 75 = Location ID (BS User ID)
End	l Compone	nt Block		
Con	nponent B	lock <instrument></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	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End	l Compone	nt Block		
	40	OrdType	Ν	Order type applicable to the order: 1 = Market 2 = Limit
	59	TimeInForce	Ν	 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 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 Y The time at which the particular message was generated. 528 OrderCapacity N Designates the capacity of the firm placing the order: 528 OrderRestrictions N Restrictions associated with this order: 529 OrderRestrictions N Restrictions associated with this order: • 2 = Index Arbitrage 529 OrderRestrictions N Restrictions associated with this order or specialist in security 1090 MaxPriceLevels N Maximum number of price levels to trade thro 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:	
44PriceNPrice of order. Required if: OrdType (40) = 2 (Limit).60TransactTimeYThe time at which the particular message was generated.528OrderCapacityNDesignates the capacity of the firm placing the order: • A = Agency • P = Principal529OrderRestrictionsNRestrictions associated with this order: • 2 = Index Arbitrage • 5 = Acting as Market Maker or Specialist in Security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security • 6 = Acting as Market Maker or Specialist in security 	
Required if: OrdType (40) = 2 (Limit).60TransactTimeYThe time at which the particular message was generated.528OrderCapacityNDesignates the capacity of the firm placing the order: • A = Agency • P = Principal529OrderRestrictionsNRestrictions 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 (5 (Sell Short)1090MaxPriceLevelsNMaximum number of price levels to trade thro Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.77PositionEffectNIndicates whether the resulting position or closing position: • C = Close	
Image: Construction of the second s	
order:• A = Agency• P = Principal529OrderRestrictionsNRestrictions 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 security1090MaxPriceLevelsNMaximum number of price levels to trade thro Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.77PositionEffectNIndicates whether the resulting position after a trade should be an opening position or closing position: • C = Close	S
 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)) MaxPriceLevels Maximum number of price levels to trade thromosome 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 	ie
Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.77PositionEffectNIndicates whether the resulting position after a trade should be an opening position or closing position: • C = Close	: in
trade should be an opening position or closing position: C = Close	ough.
Side (54) = 1 (Buy) to indicate covering a s sell.	Ig
39 OrdStatus Y Order Status after applying the transaction that being communicated: • C = Expired	nat is
150 ExecType Y Execution Type that indicates the reason for the generation of the Execution Report: • C = Expired	the
14 CumQty Y Cumulative execution size	
151 LeavesQty Y Open order quantity	
1328RejectTextNTextual description of the reason for expiration	on
58 Text N Free Text	
1093 LotType N Lot Type of the order: 1 = Odd Lot 1 = Odd Lot 2 = Round Lot Absence of this field indicates a Round (i.e., Bor Lot order.	3oard)



797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.			
Message Trailer						

7.7.5 Order Replaced

The OCG-C sends this execution report when a Cancel/Replace request or when a Quote Modification is accepted. This message is not applicable to an odd lot/special lot order.

F	IX Tag	Field Name	Required?	Description
Message Header				
	35	MsgType	Y	8 = Execution Report
Me	ssage Bo	dy		
	11	ClOrdID	Ν	Client specified identifier of the order cancel request.
	41	OrigClOrdID	Ν	Original client specified identifier for the incoming cancel request
	37	OrderID	Y	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	Y	Number of party identifiers. The value in this field can be 1 or 2.
÷	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/BS User ID.
→	447	PartyldSource	Y	 Defines the naming convention used in specifying the PartyID (448): D = Proprietary/Custom Code
\rightarrow	452	PartyRole	Y	Role of the specified PartyID (448):
				 1 = Executing Firm (Broker ID that submitted the order) 75 = Location ID (BS User ID)
End	Compone	nt Block		
Con	nponent B	lock <instrument></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	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).



End Compone	ent Block		
40	OrdType	Ν	Order type applicable to the order: 1 = Market 2 = Limit
59	TimeInForce	Ν	 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	Y	Side of the order 1 = Buy 2 = Sell 5 = Sell Short
38	OrderQty	Ν	Total order quantity of the order
44	Price	Ν	Price of order. Required if: OrdType (40) = 2 (Limit).
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
529	OrderRestrictions	Ν	 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	Ν	Maximum number of price levels to trade through. Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.
2362	SelfMatchPreventionID	Ν	The identifier to prevent self-matching. Present only for quote modification.
77	PositionEffect	Ν	 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: • 0 = New • 1 = Partially Filled



150	ЕхесТуре	Y	Execution Type that indicates the reason for the
			generation of the Execution Report:
			5 = Replaced
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
58	Text	Ν	Free Text
1093	LotType	Ν	Lot Type of the order:
			2 = Round Lot
			Absonse of this field indicatos a Round (i.e. Roard)
			Absence of this field indicates a Round (i.e., Board) Lot order.
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop
			copy of another message.
			Always set to Y.
			•

Message Trailer

Note: For an Order Cancel/Replace Request (i.e., Order Amend Request) submitted through interfaces other than the OCG-C, to modify order price and/or increase order quantity, the Drop Copy interface will provide an Execution Report = Order Cancelled first (for the original order) followed by, if applicable, Execution Report = Order Accepted (for the replaced order).

7.7.6 Auto-matched Trade (Board Lot Order Executed)

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

FI	X Tag	Field Name	Required?	Description	
Message Header					
	35	MsgType	Y	8 = Execution Report	
Message Body					
	11	ClOrdID	Ν	Client specified identifier of the order.	
	37	OrderID	Y	Order ID as assigned by the exchange.	
	17	ExecID	Y	Unique Execution ID assigned for each Execution Report generated.	
	880	TrdMatchID	Ν	Identifier assigned to a trade by the matching system	
Component Block <parties></parties>					
	453	NoPartyIDs	Y	Number of party identifiers. The value in this field can be 1 or 2.	
<i>></i>	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/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 the order) 75 = Location ID (BS User ID) 	
End Component Block					
Component Block <instrument></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	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End Compone	ent Block		
40	OrdType	Ν	Order type applicable to the order: 1 = Market 2 = Limit
59	TimeInForce	Ν	 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	Y	Side of the order 1 = Buy 2 = Sell 5 = Sell Short
38	OrderQty	Ν	Total order quantity of the order
44	Price	Ν	Price of order. Required if: OrdType (40) = 2 (Limit).
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
529	OrderRestrictions	Ν	 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	Ν	Maximum number of price levels to trade through. Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.
77	PositionEffect	Ν	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	Y	Execution Type that indicates the reason for the generation of the Execution Report:F = Trade
31	LastPx	Y	Execution Price
32	LastQty	Y	Execution Size
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
574	MatchType	Ν	 The point in the matching process at which the trade was matched: 4 = Auto match 5 = Cross Auction
1115	OrderCategory	Ν	 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	Ν	Free Text
1093	LotType	Ν	Lot Type of the order: 2 = Round Lot Absence of this field indicates a Round (i.e., Board) Lot order
1057	AggressorIndicator	Ν	 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
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Trai	iler		

7.7.7 Auto-matched Trade Cancelled (Executed Trade Cancelled)

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

FIX Tag	Field Name	Required?	Description			
Message Header						
35	MsgType	Y	8 = Execution Report			



11CIOrdIDNClient specified identifier of the order.37OrderIDYOrder ID as assigned by the exchange.17ExecIDYUnique Execution ID assigned for each Execution Report generated.19ExecReIDYExecution Reference identifier used with Trade Cancel; refers to the Exec ID of the original trade.Content in the specified admitting the order: Broker ID/SU User ID.19ExecReIDYNumber of party identifiers. The value in this field Cancel and b of or 2.19A48PartyIDYNumber of party identifiers. The value in this field Can be 1 or 2.10A48PartyIDYID of the Broker client submitting the order: Broker ID/SU User ID.10A48PartyIDYID of the Broker client submitting the order: Broker ID/SU User ID.10A52PartyRoleYRole of the specified PartyID (448): • D = Proprietary/Custom Code11YSecurityIDYInstrument identifier12SecurityIDSourceYIdentifies the source of the SecurityID (48): • SecurityID (48): • SecurityID (48) is specified12SecurityIDSourceYIdentifies the source of the SecurityID (48) is • SecurityID (48) is specified13SecurityIDSourceYIdentifies the source of the SecurityID (48): • SecurityID (48) is specified14SecurityIDSourceYIdentifies the source of the SecurityID (48) is • SecurityID (48) is specified15SecurityIDSourceYIdentifies the source of the Secu	Mes	Message Body				
17ExecIDYUnique Execution ID assigned for each Execution Report generated.19ExecRefIDYExecution Reference identifier used with Trade Cancel; refers to the Exec ID of the original trade.Composed to provide the execution Reference identifier used with Trade Cancel; refers to the Exec ID of the original trade. 453 NoPartyIDsYNumber of party identifiers. The value in this field can be 1 or 2. 454 PartyIDYID of the Broker client submitting the order: Broker ID/BS User ID. 453 PartyIdSourceYDefines the maming convention used in specifying the PartyID (448): . . D = Proprietary/Custom Code 453 PartyRoleYRole of the specified PartyID (448): . . . D = Proprietary/Custom CodeExecuting Firm Broker ID that submitted the order) . .Execution ID (BS User ID)Executing Firm Broker ID that submitted the order) . . .Executing Firm Broker ID that submitted the order) . . .ABORTYIDABORTYIDABORTYIDContryIDSource207SecurityIDSourceA SecurityExchangeNThe market which is used to identify the security: .A SecurityIDSourceA SecurityIDSourceA SecurityID Call . . <td></td> <td>11</td> <td>ClOrdID</td> <td>Ν</td> <td>Client specified identifier of the order.</td>		11	ClOrdID	Ν	Client specified identifier of the order.	
Image: Problem in the second of the secon		37	OrderID	Y	Order ID as assigned by the exchange.	
Cancel; refers to the Exec ID of the original trade.Concel; refers to the Exec ID of the original trade.Concel; refers to the Exec ID of the original trade.Concel; refers to the Exec ID of the original trade. 433 NoPartyIDsYNumber of party identifiers. The value in this field can be 1 or 2. 2 PartyIDYID of the Broker client submitting the order: Broker ID/BS User ID. 2 PartyIdSourceYDefines the naming convention used in specifying the PartyID (448): 		17	ExecID	Y		
453 NoPartyIDs Y Number of party identifiers. The value in this field can be 1 or 2. → 448 PartyID Y ID of the Broker client submitting the order: Broker ID/BS User ID. → 447 PartyIdSource Y ID of the Broker client submitting the order: Broker ID/BS User ID. → 447 PartyIdSource Y Defines the naming convention used in specifying the PartyID (448):		19	ExecRefID	Y		
Image: Constraint of the second se	Com	ponent B	lock <parties></parties>			
IndexFunctionFunctionImage: FunctionFunctionBroker ID/BS User ID. Broker ID/BS User ID.Image: FunctionFunctionBroker ID/BS User ID.Image: FunctionFunctionFunctionImage: FunctionFunctionFunc		453	NoPartyIDs	Y		
the PartyID (448): • D = Proprietary/Custom Code2452PartyRoleYRole of the specified PartyID (448): • 1 = Executing Firm (Broker ID that submitted the order) • 75 = Location ID (BS User ID)End Component BlockComponent Block2SecurityIDYInstrument identifier22SecurityIDSourceYIdentifies the source of the SecurityID (48): • 8 = Exchange Symbol Required if: SecurityID (48) is specified207SecurityExchangeNThe market which is used to identify the security: • XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).End Component BlockUT OrdTypeNOrder type applicable to the order: • 1 = Market • 2 = Limit40OrdTypeNTime qualifier of the order: • 0 = Day (Default) • 3 = Immediate or Cancel = IOC • 3 = IMBRICATE or Samo, Absence of this field is interpreted as 0 = Day.54SideYSide of the order • 1 = Buy • 2 = Sell Short	÷	448	PartyID	Y		
Indefinition </td <td>→</td> <td>447</td> <td>PartyldSource</td> <td>Y</td> <td>the PartyID (448):</td>	→	447	PartyldSource	Y	the PartyID (448):	
Component Birtiments48SecurityIDYInstrument identifier22SecurityIDSourceYIdentifies the source of the SecurityID (48): 	→	452	PartyRole	Y	 1 = Executing Firm (Broker ID that submitted the order) 	
48SecurityIDYInstrument identifier22SecurityIDSourceYIdentifies the source of the SecurityID (48): 	End	Compone	nt Block			
22SecurityIDSourceYIdentifies the source of the SecurityID (48): • 8 = Exchange Symbol Required if: SecurityID (48) is specified207SecurityExchangeNThe market which is used to identify the security: • XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).End Component40OrdTypeNOrder type applicable to the order: • 1 = Market • 2 = Limit59TimeInForceNTime 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.54SideYSide of the order • 1 = Buy • 2 = Sell • 5 = Sell Short	Com	ponent B	lock <instrument></instrument>			
Image: Security IDImage: Security IDImage		48	SecurityID	Y	Instrument identifier	
NOrder type applicable to the order: 		22	SecurityIDSource	Y	 8 = Exchange Symbol Required if: 	
40OrdTypeNOrder type applicable to the order: 1 = Market 2 = Limit59TimeInForceNTime 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.54SideYSide of the order 1 = Buy 2 = Sell 5 = Sell Short		207	SecurityExchange	Ν	 XHKG Required if: 	
Image: Side of the orderImage: Side of the order59TimeInForceNTime qualifier of the order: 	End	Compone	nt Block			
 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 Y Side of the order 1 = Buy 2 = Sell 5 = Sell Short 		40	OrdType	Ν	1 = Market	
 1 = Buy 2 = Sell 5 = Sell Short 		59	TimeInForce	Ν	 0 = Day (Default) 3 = Immediate or Cancel = IOC 4 = Fill or Kill = FOK 9 = At Crossing. Applicable for orders in Auction session. 	
38 OrderQty N Total order quantity of the order		54	Side	Y	 1 = Buy 2 = Sell 	
		38	OrderQty	Ν	Total order quantity of the order	



44	Price	Ν	Price of order. Required if: OrdType (40) = 2 (Limit).
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
529	OrderRestrictions	Ν	 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	Ν	Maximum number of price levels to trade through. Applicable if: OrdType (40) = 2 (Limit). If present, this should be set as 1.
77	PositionEffect	Ν	 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 • 1 = Partially Filled • 2 = Filled • 4 = Cancelled • C = Expired
150	ЕхесТуре	Y	Execution Type that indicates the reason for the generation of the Execution Report: H = Trade Cancel
31	LastPx	Ν	Execution Price Will be set to 0
32	LastQty	Ν	Execution Size Will be set to 0
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
1115	OrderCategory	Ν	 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	Ν	Free Text



1093	LotType	Ν	Lot Type of the order: 2 = Round Lot Absence of this field indicates a Round (i.e., Board) Lot order.
378	ExecRestatementReason	Ν	Code to identify the reason for an Execution Report message with Exec Type= H (Trade Cancel): 8 = Market (exchange) option
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Tra	ailer		

7.7.8 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.

F	IX Tag	Field Name	Required?	Description			
Me	Message Header						
	35	MsgType	Y	8 = Execution Report			
Me	ssage Bo	dy					
	11	ClOrdID	Y	Client specified identifier of the order.			
	37	OrderID	Y	Order ID as assigned by the exchange.			
	17	ExecID	Y	Unique Execution ID assigned for each Execution Report generated.			
	880	TrdMatchID	Ν	Identifier assigned to a trade by the matching system			
Com	ponent B	lock <parties></parties>					
	453	NoPartyIDs	Y	Number of party identifiers. The value in this field can be 1 or 2 or 3.			
÷	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/Counterparty Broker ID/BS User ID.			
<i>→</i>	447	PartyldSource	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 is receiving this trade) 17 = Contra Firm (Counterparty Broker ID for this trade). This is provided only if applicable. 75 = Location ID (BS User ID) 			
End	End Component Block						
Com	Component Block <instrument></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	Ν	The market which is used to identify the security: • XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End Compone	ent Block		
40	OrdType	Ν	Order type applicable to the order: • 2 = Limit
59	TimeInForce	Ν	 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	Ν	Total order quantity of the order
44	Price	Ν	Price of order. Required if: OrdType (40) = 2 = Limit.
60	TransactTime	Y	The time at which the particular message was generated.
528	OrderCapacity	Ν	 Designates the capacity of the firm placing the order: A = Agency P = Principal
77	PositionEffect	Ν	 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: 2 = Filled
150	ЕхесТуре	Y	Execution Type that indicates the reason for the generation of the Execution Report: • F = Trade
31	LastPx	Y	Execution Price
32	LastQty	Y	Execution Size
14	CumQty	Y	Cumulative execution size
151	LeavesQty	Y	Open order quantity
1115	OrderCategory	Ν	 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	Ν	Free Text
1093	LotType	Ν	Lot Type of the order: 1 = Odd Lot
5681	ExchangeTradeType	Ν	 Exchange assigned Trade Type: E = Special Lot – Semi-Automatic O = Odd Lot – Semi-Automatic
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Tra	ailer		

7.7.9 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 drop copy client if the Side (54) refers to an Odd lot/Special lot order submitted by a broker through a OCG-C session.

F	IX Tag	Field Name	Required?	Description		
Me	Message Header					
	35	MsgType	Y	8 = Execution Report		
Me	ssage Bo	dy				
	11	ClOrdID	Y	Client specified identifier of the order.		
	37	OrderID	Y	Order ID as assigned by the exchange.		
	17	ExecID	Y	Unique Execution ID assigned for each Execution Report generated.		
	19	ExecRefID	Y	Execution Reference identifier used with Trade Cancel; refers to the Exec ID of the original trade.		
Com	nponent B	lock <parties></parties>				
	453	NoPartyIDs	Y	Number of party identifiers. The value in this field can be 1 or 2.		
÷	448	PartyID	Y	ID of the Broker client submitting the order: Broker ID/BS User ID.		
→	447	PartyldSource	Y	Defines the naming convention used in specifying the PartyID (448):D = Proprietary/Custom Code		
<i>→</i>	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 Component Block						
Com	Component Block <instrument></instrument>					
	48	SecurityID	Y	Instrument identifier		
	22	SecurityIDSource	Y	Identifies the source of the SecurityID (48): • 8 = Exchange Symbol		



Required If: Security[0 (48) is specified207Security[ExchangeNThe market which is used to identify the security: • XHKG Required If: Security[DSource (22) = 8 (Exchange Symbol).End Component Block0rdTypeNOrder type applicable to the order: • 2 = timit400rdTypeNOrder type applicable to the order: • 0 = Day (Default) Absence of this field is interpreted as 0 = Day.59TimeInForceNTime qualifier of the order: • 0 = Day (Default) Absence of this field is interpreted as 0 = Day.54SideYSide of the order • 1 = Buy • 2 = Sell • 5 = Sell Short38OrderQtyNTotal order quantity of the order44PriceNRequired If: OrdType (40) = 2 = Limit.60TransactTimeYThe time at which the particular message was generated.528OrderCapacityNDesignates the capacity of the firm placing the order: • A = Agency • P = Principal77PositionEffectNIndicates 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.39OrdStatusYExecution Type that indicates the reason for the generation of the Security Filed • C = Expired150ExecTypeYExecution Price Will be set to 031LastPxNExecution Price Will be set to 032LastQyYCumulative execution size				
End Component BlockEnd Component Block40OrdTypeN41Order type applicable to the order: • 2 = Limit52TimeInForceN53TimeInForceN54SideY54SideY54SideY55Sell Short38OrderQtyN70TransactTimeY60TransactTimeY60TransactTimeY71PositionEffectN72PositionEffectN73PositionEffectN74PriceN75Solid StatusY76CorderCapacity77PositionEffectN78OrderStatusY79PositionEffectN70PositionEffectN71PositionEffectN72PositionEffectN73CrdStatusY74CrdStatus75StatusY76Status77PositionEffectN78CrdStatus79PositionEffect70Status71PositionEffect72Status73PositionEffect74PordStatus75PositionEffect76PordStatus77PositionEffect78PordStatus79PositionEffect70PositionEffect71 <td></td> <td></td> <td></td> <td></td>				
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. OrderQty N 60 TransactTime Y 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 arter 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. Seing communicated: O = New I = Partially Filled Z = Filled A = Cancelled C = Expired	207	SecurityExchange	Ν	 XHKG Required if:
Image: Second	End Compone	ent Block		
Image: Constraint of the second sec	40	OrdType	Ν	
Image:	59	TimeInForce	Ν	• 0 = Day (Default)
44PriceNPrice of order. Required if: OrdType (40) = 2 = Limit.60TransactTimeYThe time at which the particular message was generated.528OrderCapacityNDesignates the capacity of the firm placing the 	54	Side	Y	 1 = Buy 2 = Sell
Required if: OrdType (40) = 2 = Limit.60TransactTimeYThe time at which the particular message was generated.528OrderCapacityNDesignates the capacity of the firm placing the order: • A = Agency • P = Principal77PositionEffectNIndicates whether the resulting position after a trade should be an opening position or closing position: • C = Close Applicable only if: slide (54) = 1 (Buy) to indicate covering a short sell.39OrdStatusYOrder Status after applying the transaction that is being communicated: • 0 = New • 1 = Partially Filled • 2 = Filled • C = Expired150ExecTypeYExecution Type that indicates the reason for the generation of the Execution Report: • H = Trade Cancel31LastPxNExecution Size Will be set to 032LastQtyNExecution Size Will be set to 0	38	OrderQty	Ν	Total order quantity of the order
Image: Content of the second	44	Price	Ν	Required if:
order: • A = Agency • P = Principal77PositionEffectNIndicates 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.39OrdStatusYOrder Status after applying the transaction that is being communicated: • 0 = New • 1 = Partially Filled • 2 = Filled • 4 = Cancelled • C = Expired150ExecTypeYExecution Type that indicates the reason for the generation of the Execution Report: • H = Trade Cancel31LastPxNExecution Price Will be set to 032LastQtyNExecution Size Will be set to 0	60	TransactTime	Y	
trade should be an opening position or closing position: • C = Close Applicable only if: Side (54) = 1 (Buy) to indicate covering a short sell.39OrdStatusYOrder Status after applying the transaction that is being communicated: • 0 = New • 1 = Partially Filled • 2 = Filled • C = Expired150ExecTypeYExecution Type that indicates the reason for the generation of the Execution Report: • H = Trade Cancel31LastPxNExecution Price Will be set to 032LastQtyNExecution Size Will be set to 0	528	OrderCapacity	Ν	order: • A = Agency
being communicated:0 = New1 = Partially Filled2 = Filled4 = CancelledC = Expired150ExecTypeYExecution Type that indicates the reason for the generation of the Execution Report:151LastPxNExecution Price Will be set to 032LastQtyNExecution Size Will be set to 0	77	PositionEffect	Ν	 trade should be an opening position or closing position: C = Close Applicable only if: Side (54) = 1 (Buy) to indicate covering a short
generation of the Execution Report: • H = Trade Cancel31LastPxNExecution Price Will be set to 032LastQtyNExecution Size Will be set to 0	39	OrdStatus	Y	 being communicated: 0 = New 1 = Partially Filled 2 = Filled 4 = Cancelled
32 LastQty N Execution Size Will be set to 0	150	ЕхесТуре	Y	generation of the Execution Report:
Will be set to 0	31	LastPx	Ν	
14 CumQty Y Cumulative execution size	32	LastQty	Ν	
	14	CumQty	Y	Cumulative execution size



151	LeavesQty	Y	Open order quantity
1115	OrderCategory	Ν	 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
1093	LotType	Ν	Lot Type of the order: 1 = Odd Lot
58	Text	Ν	Free Text
378	ExecRestatementReason	Ν	Code to identify the reason for an Execution Report message with Exec Type= H (Trade Cancel): 8 = Market (exchange) option
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Message Tra	<u>iiler</u>		

7.8 Business Messages – Off Exchange Trade Reporting (AE)

The OCG-C uses these messages for off-exchange trades reported.

7.8.1 Trade Accepted

FIX Tag	Field Name	Required?	Description				
Message Heade	Message Header						
35	MsgType	Y	AE = Trade Capture Report				
Message Body							
571	TradeReportID	Ν	Unique Identification for the Trade Capture Report assigned by the reporting side of the 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	Ν	 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	Ν	Execution type: • F = Trade				



	939	þ	TrdRptStatus	N	Trade Report Status:
					 0 = Accepted
	31		LastPx	Y	Execution Price
	32		LastQty	Y	Execution Size
	60		TransactTime	Y	The time at which the particular message was generated.
Com	npone	ent Block	<trdcaprptsidegrp></trdcaprptsidegrp>		
	552	2	NoSides	Y	Number of sides: 1 = Overseas 2 = Default
→		54	Side	Y	Side of the trade 1 = Buy 2 = Sell 5 = Sell Short
\rightarrow	Con	nponent	Block <parties></parties>		
÷		453	NoPartyIDs	Y	Number of party identifiers. The value in this field should be 1 or 2 or 3.
\rightarrow	\rightarrow	448	PartyID	Y	Broker ID/Counterparty Broker ID/BS User ID.
→	→	447	PartyldSource	Y	Defines the naming convention used in specifying the PartyID (448): D = Proprietary/Custom Code
→	→	452	PartyRole	γ	 Role of the specified PartyID (448): 1 = Executing Firm (Broker ID that is receiving this trade) 17 = Contra Firm (Counterparty Broker ID) 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
``		-			the Broker ID that reported this trade.
<i>→</i>			ent Block		
→ ``			Block <clrinstgrp></clrinstgrp>		
<i>→</i>		576	NoClearingInstructions	N	Number of clearing instructions. Always set to 1.
<i>→</i>	<i>→</i>	577	ClearingInstruction	Ν	 Eligibility of this trade for clearing and central counterparty processing: 0 = Process normally 1 = Exclude from all netting 14 = Buy-In



\rightarrow	End Component Block				
\rightarrow	Component	Block <tradereportorderdetai< td=""><td> ></td><td></td></tradereportorderdetai<>	>		
<i>→</i>	528	OrderCapacity	Ν	 Designates the capacity of the firm: A = Agency P = Principal 	
\rightarrow	End Compon	ent Block			
<i>→</i>	77	PositionEffect	Ν	 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	Ν	Free Text	
→	1115	OrderCategory	Ν	 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	Y	Instrument identifier	
	22	SecurityIDSource	Y	 Identifies the source of the SecurityID (48): 8 = Exchange Symbol Required if: SecurityID (48) is specified 	
	207	SecurityExchange	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol). 	
End	Component B	lock			
	5681	ExchangeTradeType	Ν	 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 	
	797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.	
	sage Trailer				

7.8.2 Trade Cancelled

	FIX Tag		Field Name	Required?	Description
Mes	sage	Heade	<u>r</u>		
	35		MsgType	Y	AE = Trade Capture Report
Mes	sage	Body			
	571	L	TradeReportID	N	Unique Identification for the Trade Capture Report assigned by the reporting side of the Trade (to be returned to the reporting broker)
	100	3	TradelD	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 party opposite to that requesting this cancel) 2 = Replace (for the party requesting this cancel) 5 = Cancel due to back out of trade (for both buyer and seller if ExecType = L)
	856	5	TradeReportType	Y	Type of the Trade Report:6 = Trade Report Cancel
	112	3	TradeHandlingInstr	N	Indicates how the trade capture report should be handled by the receiver: • 0 = Trade Confirm
	150)	ЕхесТуре	Ν	 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	Y	Execution Price
	32		LastQty	Y	Execution Size
	60		TransactTime	Y	The time at which the particular message was generated.
Com	pone	nt Block	<trdcaprptsidegrp></trdcaprptsidegrp>		
	552	2	NoSides	Y	Number of sides: 1
→	→ 54		Side	Y	Side of the trade 1 = Buy 2 = Sell 5 = Sell Short
\rightarrow	Com	nponent	Block <parties></parties>		
→	→ 453		NoPartyIDs	Y	Number of party identifiers. The value in this field should be 1 or 2.
\rightarrow	\rightarrow	448	PartyID	Y	Broker ID for this side of the trade/BS User ID.
÷	÷	447	PartyIdSource	Y	Defines the naming convention used in specifying the PartyID (448): D = Proprietary/Custom Code



÷	<i>→</i>	452	PartyRole	Y	 Role of the specified PartyID (448): 1 = Executing Firm (Broker ID that is receiving this trade message) 75 = Location ID (BS User ID)
÷	End	Compon	ent Block		
End	Com	ponent B	lock		
Com	npone	ent Block	<instrument></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
	201	7	SecurityExchange	Ν	The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End Component Block					
	79	7	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Me	ssage	Trailer			

7.9 Business Messages – Semi-Auto Matched Trade

The OCG-C uses these messages for the odd-lot/special lot trades concluded through semiautomatic trading.

7.9.1 Trade Accepted

The OCG-C sends this message to the drop copy client if:

- The Side (54) in this trade message refers to the submitter of the trade,
- The Side (54) in this trade message refers to the resting order, but this order was submitted by a broker ID belonging to a non-OCG-C session.

FIX Tag	Field Name	Required?	Description
Message Heade	<u>r</u>		
35	MsgType	Y	AE = Trade Capture Report
Message Body			
571	TradeReportID	Ν	Unique Identification for the Trade Capture Report assigned by the reporting side of the 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 resting order side) 2 = Replace (for the trade reporting side)
	856		TradeReportType	Y	Type of the Trade Report: • 0 = Submit
	828	3	TrdType	Y	Type of the trade being reported: 102 = Odd Lot Trade
	150)	ЕхесТуре	Ν	Execution type: F = Trade
	939	Ð	TrdRptStatus	Ν	Trade Report Status: • 0 = Accepted
	31		LastPx	Y	Execution Price
	32		LastQty	Y	Execution Size
	60	I	TransactTime	Y	The time at which the particular message was generated.
Com	npone	nt Block	<trdcaprptsidegrp></trdcaprptsidegrp>		
	552	2	NoSides	Y	Number of sides: • 2 = Default
<i>→</i>		54	Side	Y	Side of the trade 1 = Buy 2 = Sell 5 = Sell Short
\rightarrow	Con	nponent	Block <parties></parties>		
\rightarrow		453	NoPartyIDs	Y	Number of party identifiers. The value in this field should be 1 or 2 or 3.
\rightarrow	\rightarrow	448	PartyID	Y	Broker ID/Counterparty Broker ID/BS User ID.
<i>></i>	÷	447	PartyldSource	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 is receiving this trade) 17 = Contra Firm (Counterparty Broker ID) 75 = Location ID (BS User ID) There will be one Broker ID with PartyRole = 1. Location ID (PartyRole = 75) is with relation to the Broker ID associated with the side.
\rightarrow	End	Compon	ent Block		
\rightarrow	Con	nponent	Block <tradereportorderdetai< td=""><td> ></td><td></td></tradereportorderdetai<>	>	
→		37	OrderID	Ν	Order ID associated with the order. Applicable only if the Side refers to the resting order.
<i>→</i>		11	ClOrdID	Ν	Client specified identifier of the order. Applicable only if the Side refers to the resting order.



→	528	OrderCapacity	Ν	 Designates the capacity of the firm: A = Agency P = Principal
\rightarrow	End Compon	ent Block		
<i>→</i>	77	PositionEffect	Ν	 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	Ν	Free Text
→	1115	OrderCategory	Ν	 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 Bl	lock		
Com	ponent Block	<instrument></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	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol).
End	Component Bl	lock		
	5681	ExchangeTradeType	Ν	 Exchange assigned Trade Type: E = Special Lot – Semi-Automatic O = Odd Lot – Semi-Automatic
	797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.
Me	ssage Trailer			

7.9.2 Trade Cancelled

The OCG-C sends this message to the drop copy client if:

- The Side (54) in this message refers to the submitter of the trade,
- The Side (54) in this message refers to the resting order, but this order was submitted by a broker ID belonging to a non-OCG-C session.



	FIX Tag		Field Name	Required?	Description	
Message Header						
35		5	MsgType	Y	AE = Trade Capture Report	
Message Body						
	100)3	TradeID	Y	Unique identifier as assigned to the trade by the exchange.	
	48	7	TradeReportTransType	Y	 Identifies the trade report message transaction type: 5 = Cancel due to back out of trade (for both buyer and seller if ExecType = L) 	
	85	6	TradeReportType	Y	Type of the Trade Report: • 6 = Trade Report Cancel	
	15	0	ЕхесТуре	Ν	 Execution Type that indicates the reason for the generation of this confirmation: L = Triggered or activated by System (cancelled by the exchange) 	
	31	-	LastPx	Y	Execution Price	
	32	2	LastQty	Y	Execution Size	
	60)	TransactTime	Y	The time at which the particular message was generated.	
Com	npone	ent Block	<trdcaprptsidegrp></trdcaprptsidegrp>			
	55	2	NoSides	Y	Number of sides: 1	
→		54	Side	Y	Side of the trade 1 = Buy 2 = Sell 5 = Sell Short	
\rightarrow	Con	nponent	Block <parties></parties>			
→		453	NoPartyIDs	Y	Number of party identifiers. The value in this field should be 1 or 2.	
\rightarrow	\rightarrow	448	PartyID	Y	Broker ID for this side of the trade/BS User ID.	
÷	<i>→</i>	447	PartyldSource	Y	Defines the naming convention used in specifying the PartyID (448):	
→	<i>→</i>	452	PartyRole	Y	 D = Proprietary/Custom Code Role of the specified PartyID (448): 1 = Executing Firm (Broker ID that is receiving this trade message) 75 = Location ID (BS User ID) 	
\rightarrow	End	Compon	ent Block			
End	Com	ponent B	lock			
			<instrument></instrument>			
	48	3	SecurityID	Y	Instrument identifier	
	22	2	SecurityIDSource	Y	Identifies the source of the SecurityID (48): 8 = Exchange Symbol Required if:	



			SecurityID (48) is specified	
207	SecurityExchange	Ν	 The market which is used to identify the security: XHKG Required if: SecurityIDSource (22) = 8 (Exchange Symbol). 	
End Component B	lock			
797	CopyMsgIndicator	Y	Indicates whether or not this message is a drop copy of another message. Always set to Y.	
Message Trailer				

7.10 Infrastructure

7.10.1 Business Message Reject (j)

This message can be initiated by the OCG-C.

FIX Tag	Field Name	Required?	Description			
Message	Message Header					
35	MsgType	Y	j= Business Message Reject			
Message	Body					
45	RefSeqNum	Ν	Sequence number of the message which caused the rejection			
372	RefMsgType	Y	Message type of the rejected message.			
379	BusinessRejectRefID	Ν	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: 0 = Other 3 = Unspecified Message Type 4 = Application not available 			
58	Text	Ν	Where possible, message to explain reason for rejection			
Message	<u>Trailer</u>					

8. Data Dictionary

8.1 Session Level

Tag	Field Name	Data Type	Description
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	 0 = Heartbeat 1 =Test Request 2 = Resend Request 3 = Reject 4 = Sequence Reset 5 = Logout 8 = Execution Report j = Business Message Reject A = Logon AE = Trade Capture Report
36	NewSeqNo	SeqNum	Sequence number of the next message to be transmitted.
43	PossDupFlag	Boolean	Whether the message was previously transmitted under the same MsgSeqNum (34). Absence of this field is interpreted as Original Transmission (N).
45	RefSeqNum	SeqNum	Sequence number of the rejected message.
49	SenderCompID	String	Comp ID of the party sending the message.
52	SendingTime	UTCTimesta mp	Time the message was transmitted. Format: YYYYMMDD-HH:MM:SS.ssssss
56	TargetCompID	String	Comp ID of the party the message is sent to
97	PossResend	Boolean	Whether the message was previously transmitted under a different



			MsgSeqNum (34). Absence of this field is interpreted as
98	EncryptMethod	Int	Original Transmission (N). 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	UTCTimesta mp	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.sssss
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
379	BusinessRejectRefID	String	The value of the business-level "ID"
579	Businesskejectkend	String	field on the message being referenced.
380	BusinessRejectReason	Int	 Code specifying the reason for the rejection of the business message 0 = Other 3= Unspecified Message Type 4= Application not available
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	Encrypted New Password	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 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
11	ClOrdID	String	Unique identifier of the order as assigned by the client
14	CumQty	Qty	Total quantity filled
17	ExecID	String	Unique Execution ID assigned by the system for each Execution Report generated
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
38	OrderQty	Qty	Total order quantity.
39	OrdStatus	Char	Current status of the order: • 0 = New • 1 = Partially filled • 2 = Filled • 4 = Cancelled • 8 = Rejected • C = Expired
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
44	Price	Price	Limit price of the order
48	SecurityID	String	Identifier of the instrument.



	e: 1		
54	Side	Char	Side of the order:
58	Text	String	Free format text string
59	TimeInForce	Char	 Specifies how long the order remains in effect: Absent = Day 0 = Day 3 = IOC 4 = FOK 9 = At Crossing
60	TransactTime	UTCTimestamp	Time qualifier of the order. Format: YYYYMMDD-HH:MM:SS.ssssss
77	PositionEffect	Char	 Indicates whether the resulting position after a trade should be an opening position or closing position: C = Close
150	ЕхесТуре	Char	 Describes the specific Execution report 0 = New 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
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 18 = Cancelled, self-match prevention aggressive order 19 = Cancelled, self-match prevention passive order 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



447PartyIDSourceCharidentifies class or source of the PartyID (448) value.448PartyIDStringParty identifies the type or role of the PartyID (448) specified452Party RoleIntIdentifies the type or role of the PartyID (448) specified453NoPartyIDsNumInGroupNumber of PartyID487TradeReportTransTypeIntIdentifies the type or role of the PartyID (448) specified487TradeReportTransTypeIntIdentifies trade Report message transaction type: • 0 = New • 2 = Replace • 5 = Cancel due to back out of trade.528OrderCapacityCharDesignates the capacity of the firm placing the order: • 1 = Agency • 2 = Principal529OrderRestrictionsMultipleChar 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 (SEI Short)552NoSidesNumINGroupNumber of Side repeating group instances571TradeReportIDStringUnique identifier of trade capture report574MatchTypeIntClearing Information: • 0 = Process normally • 1 = Exclude from al netting • 1 = Actund Match • 5 = Corss Auctions577ClearingInstructionsNumINGroupNumber or clearing instructions577ClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from al netting • 1 = Actual Frade • 1 a = U in797CopyMsgIndicatorBooleanIndicates whether or not the message is a dro				
452Party RoleIntIdentifies the type or role of the PartyID (448) specified453NoPartyIDSNumInGroupNumber of PartyID487TradeReportTransTypeIntIdentifies Trade Report message transaction type: • 0 = New • 2 = Replace • 5 = Cancel due to back out of trade.528OrderCapacityCharDesignates the capacity of the firm placing the order: • 1 = Agency 2 = Principal529OrderRestrictionsMultipleCharRestrictions associated with an order: • 2 = Principal521NoSidesNumINGroupNumer of Secalits In Security of Secalits In Security r 6 = Acting As Market Maker Or Specialits In Security r 6 = Acting As Market Maker Or Specialits In Security r 6 = Acting As Market Maker Or Specialits In Security r 6 = Acting As Market Maker Or Specialits In Security r 6 = Acting As Market Maker Or Specialits In Security r 6 = S(Sell Short)552NoSidesNumINGroupNumber of Side repeating group instances571TradeReportIDStringThe point in the matching process at which this trade was matched: • 4 = Auto Match • 5 = Cross Auction576NoClearingInstructionsIntClearing Instructions577ClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from all netting • 1 = Exclude from all ne	447	PartyIDSource	Char	
PartylD (448) specified453NoPartylDsNumInGroupNumber of PartylD487TradeReportTransTypeIntIdentifies Trade Report message transaction type: • 2 = Replace • 5 = Cancel due to back out of trade.528OrderCapacityCharDesignates the capacity of the firm placing the order: • 1 = Agency • 2 = Principal529OrderRestrictionsMultipleCharRestrictions associated with an order: • 2 = Index Arbitrage • 5 = Acting As Market Maker Or Specialist in Security • 6 = 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)552NoSidesNumINGroupNumber of Side repeating group instances571TradeReportIDStringUnique identifier of trade capture report574MatchTypeStringThe point in the matching process at which this trade was matched: • 4 = Auto Match • 5 = Cross Autoin577ClearingInstructionsNumINGroupNumber of clearing instructions577ClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from all netting • 1 = 102 = Odd Lo	448	PartyID	String	Party identifier/code
487TradeReportTransTypeIntIdentifies Trade Report message transaction type: • 0 = New • 2 = Replace • 5 = Cancel due to back out of trade.528OrderCapacityCharDesignates the capacity of the firm placing the order: • 1 = Agency • 2 = Principal529OrderRestrictionsMultipleCharRestrictions associated with an order: • 2 = Index Arbitrage • 5 = Acting As Market Maker Or Specialist In Security • 6 = Acting As Market Maker Or Specialist In Security • 6 = Acting As Market Maker Or Specialist In Underlying of a derivative security • 7 the above 3 values are applicable only if Side = 5 (Sell Short)521NoSidesNumINGroupNumber of Side repeating group instances571TradeReportIDStringUnique identifier of trade capture report574MatchTypeStringThe point in the matching process at which this trade was matched: • 4 = Auto Match • 5 = Cross Auction575NoClearingInstructionsNumINGroupNumber of clearing instructions576NoClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from all netting • 1 4 = Buy in797CopyMsgIndicatorBooleanIndicates whether or not the message is a drop copy of another message. • 4 = Late Trade • 22 = Privately Negotiated Trade • 104 = Overseas Trade826TradeReportTypeIntType of the Trade Report:	452	Party Role	Int	
Image: Section of the section of th	453	NoPartyIDs	NumInGroup	Number of PartyID
placing the order: • 1 = Agency • 2 = Principal529OrderRestrictionsMultipleCharRestrictions 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)552NoSidesNumINGroupNumber of Side repeating group instances571TradeReportIDStringUnique identifier of trade capture report574MatchTypeStringThe point in the matching process at which this trade was matched: • 5 = Cross Auction575NoClearingInstructionsNumINGroupNumber of clearing instructions576NoClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from all netting • 14 = Buy In797CopyMsgIndicatorBooleanIndicates whether or not the message is a drop copy of another message.828TrdTypeIntType of the trade being reported: • 4 = Late Trade • 102 = Odd Lot Trade • 102 = Odd Lot Trade • 102 = Odd Lot Trade • 104 = Overseas Trade	487	TradeReportTransType	Int	 transaction type: 0 = New 2 = Replace 5 = Cancel due to back out of
Image: series of the series	528	OrderCapacity	Char	placing the order: 1 = Agency
111	529	OrderRestrictions	MultipleChar	 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
Image: constraint of the second sec	552	NoSides	NumINGroup	
which this trade was matched:4 = Auto Match576NoClearingInstructionsNumINGroupNumber of clearing instructions577ClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from all netting • 14 = Buy In797CopyMsgIndicatorBooleanIndicates whether or not the message is a drop copy of another message.828TrdTypeIntType of the trade being reported: • 4 = Late Trade • 102 = Odd Lot Trade • 104 = Overseas Trade856TradeReportTypeIntType of the Trade Report:	571	TradeReportID	String	
577ClearingInstructionIntClearing Information: • 0 = Process normally • 1 = Exclude from all netting • 14 = Buy In797CopyMsgIndicatorBooleanIndicates whether or not the message is a drop copy of another message.828TrdTypeIntType of the trade being reported: • 4 = Late Trade • 22 = Privately Negotiated Trade • 102 = Odd Lot Trade • 104 = Overseas Trade856TradeReportTypeIntType of the Trade Report:	574	MatchType	String	which this trade was matched:4 = Auto Match
Image: Non-stateImage: Non-stateImage: Non-state797CopyMsgIndicatorBooleanIndicates whether or not the message is a drop copy of another message.828TrdTypeIntType of the trade being reported: 	576	NoClearingInstructions	NumINGroup	Number of clearing instructions
828TrdTypeIntType of the trade being reported: • 4 = Late Trade • 22 = Privately Negotiated Trade • 102 = Odd Lot Trade • 104 = Overseas Trade856TradeReportTypeIntType of the Trade Report:	577	ClearingInstruction	Int	 0 = Process normally 1 = Exclude from all netting
 4 = Late Trade 22 = Privately Negotiated Trade 102 = Odd Lot Trade 104 = Overseas Trade 856 TradeReportType Int Type of the Trade Report: 	797	CopyMsgIndicator	Boolean	_
	828	TrdType	Int	 4 = Late Trade 22 = Privately Negotiated Trade 102 = Odd Lot Trade
	856	TradeReportType	Int	



			• 6 = Trade Report Cancel
880	TrdMatchID	String	Identifier assigned to a trade by the matching system
939	TrdRptStatus	Int	 Trade Report Status: 0 = Accepted 1 = Rejected Absence of this field indicates 0 = Accepted
1003	TradelD	String	The unique ID assigned to the trade entity once it is received or matched by the Exchange
1057	AggressorIndicator	Boolean	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	 Lot Type of the order: 1 = Odd Lot 2 = Round Lot Absence of this field indicates a Round (i.e., Board) Lot order.
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
1328	RejectText	String	Rejection text
2362	SelfMatchPreventionID	String	The identifier to prevent self-matching
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-Auto O = Odd Lot - Semi-Auto



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.