



## The driving force for derivatives

SAIL Certification Test Cases Guide

SOLA® Certification Specification

Issue 1 - September 2009



**London**  
Stock Exchange Group



The driving force for derivatives

## Preface

### TECHNICAL SPECIFICATION PUBLICATIONS

These technical specifications and certification specifications detail the trading and information services for the SOLA Derivative Trading System provided by the London Stock Exchange Group.

### ASSOCIATED PUBLICATIONS

This document is one of two certification specification guides for SOLA.

- SAIL Certification Test Cases Guide
- FIX Certification Test Cases Guide

The following are five printed specifications, supplied as a set, to support SOLA:

- SAIL Business Design Guide
- SOLA FIX Business Design Guide
- SOLA FIX Specifications Guide
- SOLA HSVF Specifications Guide
- SAIL Specifications Guide

These documents, including this guide, can be found at the EDX London website at:  
[www.edxlondon.com/roadmap](http://www.edxlondon.com/roadmap)

### ENQUIRIES

If you would like further information please contact EDX London Member Services at the details below:

EDX London  
10 Paternoster Square  
London  
EC4M 7LS

Telephone: +44 (0)207 797 4333

Email: [memberservices@edxlondon.com](mailto:memberservices@edxlondon.com)



The driving force for derivatives

## Use of This Documentation

**This document is the property of EDX London and neither the document nor its contents may be disclosed to a third party, nor may it be copied, without EDX London's prior written consent.**

Every effort has been made to ensure that the information in this guide is correct at the time of publication but EDX London does not accept liability for any error or omission. The development of EDX London Limited's products and services is continuous and published information may not be up to date. It is important to check the current position with EDX London Limited. This guide may be amended and reissued from time to time.

All information within this guide is the property of EDX London Limited. Reproduction, redistribution and transmission of any information contained within this document is strictly prohibited without prior written permission of EDX London Limited. EDX London accepts no liability for decisions taken, or systems or other work carried out by any party, based on this document. EDX London shall not be liable for any claims or losses of any nature arising directly or indirectly from use of the data or material contained within this document (except to the extent required by law).

© September 2009 EDX London Limited | A London Stock Exchange business  
10 Paternoster Square, London EC4M 7LS  
Telephone +44 (0)20 7797 1000  
[www.edxlondon.com](http://www.edxlondon.com)



The driving force for derivatives

## Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
1.1	Purpose	5
1.2	Readership	5
<b>2</b>	<b>Overview</b>	<b>6</b>
2.1	Certification Instruments	6
<b>3</b>	<b>Terminology</b>	<b>7</b>
<b>4</b>	<b>Certification Test Cases</b>	<b>8</b>
4.1	Technical Test Cases	8
4.2	Unsolicited Services Test Cases	15
4.3	Order Creation Test Cases	19
4.4	Order Cancellation Test Cases	37
4.5	Order Modification Test Cases	39
4.6	Request for Quote Test Cases	48
4.7	Bulk Quote Test Cases	50
4.8	Trade management Test Cases	55



The driving force for derivatives

## 1 Introduction

### 1.1 Purpose

The purpose of this publication is to provide customers with the test cases and details necessary for successfully completing certification for the SOLA trading system.

This SAIL Certification Test Cases Guide provides test cases for participants and independent software vendors for the certification of their application in order to interface with SOLA using the native SOLA Access Information Language (SAIL) protocol.

Unless specified in the test case, the following market states apply:

- Group of instrument used is in 'Continuous Trading' mode;
- Instruments are in 'Authorized' mode;
- Instruments price limits are 00000.0001– 99999.5000.

### 1.2 Readership

The target audience for these publications is anyone working at either the business or Information Technology (IT) level of an organisation interested in certification for the SOLA trading platform.



The driving force for derivatives

## 2 Overview

### 2.1 Certification Instruments

Instruments involved in the various certification test cases are identified as INST1 to INST22. These symbols may refer to any instrument available in the LSE test environment. According to the client requirements, the list of instruments to be used may either be formally defined prior to the certification or “on the fly” as the certification goes.

Symbols GRP1 and GRP2 may refer to any instrument group available in the LSE test environment. Symbol GRP1 may refer to any strategy instrument group. As for instruments, the list of groups to be used may either be formally defined prior to the certification or “on the fly” as the certification goes, in accordance with the client’s requirements.



The driving force for derivatives

### 3 Terminology

Term	Definition
Client	Refers to a computer system able to interact with the LSE electronic trading platform and to support the specific range of functionalities required by the firm's trading activities.
Instrument	A specific tradable option or future or strategy. For options, there are two instruments for each underlying, expiry month and strike price combination: one put and one call.
Instrument group	Refers to all instruments with the same underlying.



The driving force for derivatives

## 4 Certification Test Cases

### 4.1 Technical Test Cases

<b>Type:</b> Technical		<b>ID #:</b> TEC-01		<b>Requirement:</b> Mandatory	
<b>Description:</b> Establishing the first SAIL connection of a trading session.					
<b>Comments:</b> First Time User Connection (Message Type TC).					
<b>Prerequisites</b>					
None					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<u>Client:</u> Connects to SOLA. Sends a TC message. [Exchange Message ID: 0]	Connection established. Sends a TK message [User sequence ID: 1]			
2	<u>LSE:</u> Sends a Heartbeat message question. Sends a TH message				
3	<u>Client:</u> Sends a Heartbeat response within the specified timeframe [Inactivity Interval] value sent in the connection message (TC). Sends a TI message				



## The driving force for derivatives

<b>Type:</b> Technical		<b>ID #:</b> TEC-02		<b>Requirement:</b> Mandatory	
<b>Description:</b> Terminating a SAIL session					
<b>Comments:</b> User Disconnection (Message Type TD)					
<b>Prerequisites</b>					
Execution of test case TEC-01					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<u>Client:</u> Disconnects from SOLA. <i>Sends a TD message</i>	Connection is terminated. <i>Sends a TL message</i>			

<b>Type:</b> Technical		<b>ID #:</b> TEC-03		<b>Requirement:</b> Mandatory	
<b>Description:</b> User Reconnection during the session – Retransmission from next message.					
<b>Comments:</b> User Reconnection (Message Type TC)					
<b>Prerequisites</b>					
Execution of test cases TEC-01 and TEC-02					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<u>Client:</u> Reconnects to SOLA. <i>Sends a TC message with a blank Exchange Message ID:</i> <i>[Exchange message ID: “”]</i>	Sends an arbitrary number of messages and the connection is re-established.  <i>Sends a TK message:</i> <i>[User sequence ID != next expected User sequence ID]</i>			



## The driving force for derivatives

<b>Type:</b> Technical		<b>ID #:</b> TEC-04		<b>Requirement:</b> Optional	
<b>Description:</b> Disconnection Instruction Management – Disconnection by Exchange; outstanding quotes are cancelled.					
<b>Comments:</b>					
<b>Prerequisites</b>					
		<b>Expected Results</b>			
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>		
1	<u>Client:</u> Connects to SOLA. <i>Sends a TC message:</i> [Exchange Message ID: 0] [Inactivity Interval: 1]	Connection established. <i>Sends a TK message</i>			
2	<u>Client:</u> Specifies disconnection instructions. <i>Sends a TA message:</i> [Disconnection Instruction: Q]	Disconnection Instruction is accepted. <i>Sends a TM message</i>			
3	<u>Client:</u> Sends a few quotes. <i>Sends several Q&lt;i&gt; messages</i>	Quotes are accepted. <i>Sends several LA messages</i>	Quote or Market Depth sent. <i>Several /FFF or H/HF messages are sent.</i> <i>For strategy: Several FS or HS message are sent</i>		
4	<u>Client:</u> Stops flow of client messages for longer than the “Inactivity Interval” period defined in the TC message of this connection.	LSE disconnects client and cancels all outstanding quotes.	Quote or Market Depth sent. <i>Several F/FF or H/HF messages are sent.</i> <i>For strategy: Several FS or HS message are sent</i>		
5	<u>Client:</u> Reconnects and receives missed messages. <i>Sends a TC message:</i> [Exchange message ID: “ ”]	Connection accepted. <i>Sends a TK message</i> Quotes cancellation notice is sent. <i>Sends an KG message</i>			



## The driving force for derivatives

<b>Type:</b> Technical		<b>ID #:</b> TEC-05		<b>Requirement:</b> Optional	
<b>Description:</b> Disconnection Instruction Management – Disconnection by Client; outstanding quotes are cancelled.					
<b>Comments:</b>					
<b>Prerequisites</b>					
Execution of test case TEC-01					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<p><u>Client:</u> Specifies disconnection instructions.</p> <p><i>Sends a TA message:</i> [Disconnection Instruction: Q]</p>	<p>Disconnection Instruction is accepted.</p> <p><i>Sends a TM message</i></p>			
2	<p><u>Client:</u> Sends a few quotes.</p> <p><i>Sends several Q&lt;i&gt; messages</i></p>	<p>Quotes are accepted.</p> <p><i>Sends several LA messages</i></p>		<p>Quote or Market Depth sent.</p> <p><i>Several F/FF or H/HF messages are sent.</i></p> <p><i>For strategy: Several FS or HS message are sent</i></p>	
3	<p><u>Client:</u> Disconnects.</p> <p><i>Sends a TD message</i></p>	<p>Disconnection is accepted.</p> <p><i>Sends a TL message</i></p> <p>All outstanding quotes are cancelled.</p>		<p>Quote or Market Depth sent.</p> <p><i>Several /FFF or H/HF messages are sent.</i></p> <p><i>For strategy: Several FS or HS message are sent</i></p>	
4	<p><u>Client:</u> Reconnects and receives missed messages.</p> <p><i>Sends a TC message:</i> [Exchange message ID: “ ”]</p>	<p>Connection accepted.</p> <p><i>Sends a TK message</i></p> <p>Quotes cancellation notice is sent.</p> <p><i>Sends an NP message</i></p>			



## The driving force for derivatives

<b>Type:</b> Technical		<b>ID #:</b> TEC-06		<b>Requirement:</b> Optional	
<b>Description:</b> Disconnection Instruction Management – Disconnection by Client; outstanding quotes are not cancelled					
<b>Comments:</b> Instruction to cancel quotes is removed					
<b>Prerequisites</b>					
Execution of test case TEC-05					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<u>Client:</u> Specifies disconnection instructions. <i>Sends a TA message: [Disconnection Instruction: N]</i>	Disconnection Instruction is accepted. <i>Sends a TM message</i>			
2	<u>Client:</u> Sends a few quotes. <i>Sends several Q&lt;i&gt; messages</i>	Quotes are accepted. <i>Sends several LA messages</i>		Quote or Market Depth sent. <i>Several F/FF or H/HF messages are sent. For strategy: Several FS or HS message are sent</i>	
3	<u>Client:</u> Disconnects. <i>Sends a TD message</i>	Disconnection is accepted; outstanding quotes are not cancelled. <i>Sends a TL message</i>			
4	<u>Client:</u> Reconnects. <i>Sends a TC message</i>	Connection is accepted. <i>Sends a TM message</i>			



## The driving force for derivatives

<b>Type:</b> Technical		<b>ID #:</b> TEC-07		<b>Requirement:</b> Mandatory	
<b>Description:</b> Re-synchronization from out of sequence situation.					
<b>Comments:</b>					
<b>Prerequisites</b>					
Client must be disconnected.					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<u>Client:</u> Connects to SOLA Sends a TC message: [Exchange Message ID: 0]	Connection established. Sends a TK message			
2	<u>Client:</u> Sends an order or a quote. [User Sequence ID: z]	Message is out of sequence. Client is disconnected. Client must reconnect. Sends a TO message: [Received User Sequence ID: z] [Expected User Message ID: x]		N/A	
3	<u>Client:</u> Reconnects. Sends a TC message	Re-connection and Disconnection Instructions are accepted. Sends a TK and a TM message			
4	<u>Client:</u> Sends an order or a quote. [User Sequence ID: x]	Message is in sequence. Order or quote is accepted.		N/A	



## The driving force for derivatives

<b>Type:</b> Technical		<b>ID #:</b> TEC-08		<b>Requirement:</b> Mandatory	
<b>Description:</b> End of Transmission					
<b>Comments:</b>					
<b>Prerequisites</b>					
Execution of test case TEC-01					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<p><u>LSE</u>: Sends an End of Transmission message at the end of the trading day.</p> <p>Restart SAIL Front End gateway.</p> <p><i>Sends a TT message</i></p>				



The driving force for derivatives

## 4.2 Unsolicited Services Test Cases

<b>Type:</b> Unsolicited Services	<b>ID #:</b> UNS-01	<b>Requirement:</b> Optional	
<b>Description:</b> Group State Change Notification			
<b>Comments:</b>			
<b>Prerequisites</b>			
Choose a Group and change the status of the group.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client:</u> Is connected and has requested to receive NG message type.		
2	<u>LSE:</u> Change Group state from Trading to Pre-Opening and then from Opening to Trading.	Sends an NG message	Group Status Updated. <i>A GR message is sent</i>



## The driving force for derivatives

<b>Type:</b> Unsolicited Services	<b>ID #:</b> UNS-02	<b>Requirement:</b> Optional	
<b>Description:</b> Instrument State Change Notification			
<b>Comments:</b>			
<b>Prerequisites</b>			
Choose an instrument and change the status of the instrument.			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<u>Client</u> : Is connected on HSVF		
2	<u>LSE</u> : Sends a bulletin message to the	Sends an NI message	Bulletin message <i>An L message is sent</i>



## The driving force for derivatives

<b>Type:</b> Unsolicited Services		<b>ID #:</b> UNS-03		<b>Requirement:</b> Optional	
<b>Description:</b> Bulletin message sent from LSE					
<b>Comments:</b>					
<b>Prerequisites</b>					
MOC enters a bulletin to be disseminated to market participants					
		<b>Expected Results</b>			
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>		
1	<u>Client</u> : Is connected and has requested to receive NI message type.				
2	<u>LSE</u> : Interrupts an instrument.	Sends an NI message	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>		



## The driving force for derivatives

<b>Type:</b> Unsolicited Services	<b>ID #:</b> UNS-04	<b>Requirement:</b> Mandatory	
<b>Description:</b> Entry, Modification, Cancellation of an Order by Market Operation Center			
<b>Comments:</b>			
<b>Prerequisites</b>			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client</u> : Is connected.	Order is entered by MOC. <i>Sends a KE message [Status: ]</i>	Quote or Market Depth sent. <i>An / FFF or H/HF message is sent For strategy: FS or HS message is sent</i>
2	<u>LSE</u> : Manually cancel order.	Order is cancelled. <i>Sends an NZ message</i>	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent For strategy: FS or HS message is sent</i>



## The driving force for derivatives

### 4.3 Order Creation Test Cases

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-01	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Market Top order that gets partially filled; the remaining quantity is booked at a limit price.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. The market for instrument INST1 must be set to [12@2.00 – 10@2.50]; no other orders must be in the book. 2. Group for instrument INST1 must be in 'Continuous Trading' mode.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><b>Client:</b> Enters a Sell Market order for 20 contracts for instrument INST1.</p> <p><i>Sends an OE message: [Price type: M]</i></p>	<p>Order is booked.</p> <p><i>Sends a KE message [Status: ]</i></p> <p>Order is partially filled and the remaining quantity is booked 8@2.00.</p> <p><i>Sends 1 NT message</i></p> <p><i>For Strategy</i></p> <p><i>Sends 1 NT message and 1 NL message per leg</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent.</p> <p><i>A C/CF message is sent</i></p> <p><i>Strategy:</i></p> <p><i>A CS message is sent</i></p> <p><i>A C/CF message per leg is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-02	<b>Requirement:</b> Mandatory	
<b>Description:</b> Entering a limit order that gets partially filled; the remaining quantity is booked. The order opens the position.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. The market for instrument INST1 must be set to [12@0.10 – 10@0.20]. 2. Group for instrument INST1 must be in 'Continuous Trading' mode.			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy order 15@0.20, Open Position, for instrument INST1.</p> <p><i>Sends an OE message:</i>          [Open/Close: O]          [Price type: L]</p>	<p>Order is booked.  <i>Sends a KE message</i>          [Status: ]</p> <p>The order is traded.  <i>Sends 1 NT message</i></p> <p><i>For Strategy</i>  <i>Sends 1 NT message and</i>    <i>1 NL message per leg</i></p>	<p>Quote or Market Depth sent.  <i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent.  <i>A C/CF message is sent</i></p> <p><i>Strategy:</i>  <i>A CS message is sent</i>  <i>A C/CF message per leg is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-03	<b>Requirement:</b> Mandatory	
<b>Description:</b> Entering a limit order that gets totally filled. The order closes the position. The order is good until cancelled by the trader.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. The market for instrument INST1 must be set to [12@200.00 – 10@201.50]. 2. Group for instrument INST1 must be in 'Continuous Trading' mode.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a Sell order 12@200.00, Close Position, for instrument INST1.</p> <p><i>Sends an OE message:</i>            [Price type: L]            [Duration Type: F]            [Open/Close: C]</p>	<p>Order is booked.  <i>Sends a KE message</i>            [Status: ]</p> <p>The order is traded.  <i>Sends 1 NT message</i></p> <p><i>For Strategy</i>  <i>Sends 1 NT message and</i>    <i>1 NL message per leg</i></p>	<p>Quote or Market Depth sent.  <i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent.  <i>A C/CF message is sent</i></p> <p><i>Strategy:</i>  <i>A CS message is sent</i>  <i>A C/CF message per leg is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-04	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a limit order that gets booked. The order is good until a specific date.			
<b>Comments:</b> This test is to validate that the client application is using the right date format, namely 'YYYYMMDD'. Represents the order's last active date.			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. The market for instrument INST1 must be set to [12@200.00 – 10@201.50].</li> <li>2. Group for instrument INST1 must be in 'Continuous Trading' mode.</li> </ol>			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Sell order 12@201.40, Good until Date with a date before the instrument expiry date and with a day number less than 12 (ex: Dec 10th, June 5th, March 2nd), for instrument INST1</p> <p><i>Sends an OE message:</i>  <i>[Price type: L]</i>  <i>[Duration Type: D]</i>  <i>[GTD Data: YYYYMMDD (Represents the order's last active day)]</i></p>	<p>Order is booked.</p> <p><i>Sends a KE message</i>  <i>[Status: ]</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-05	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a 'Fill and Kill' order that gets killed.			
<b>Comments:</b> Fill-and-kill orders cannot be booked			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [12@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Sell 'Fill and Kill' order 10@2.50 for instrument INST1.</p> <p><i>Sends an OE message: [Duration Type: E]</i></p>	<p>Order cannot be filled and is killed.</p> <p><i>Sends a KE message [Status: E]</i></p>	



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-06	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a 'Fill and Kill' order that gets partially filled.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [12@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Sell 'Fill and Kill' order 15@2.00 for instrument INST1.</p> <p><i>Sends an OE message: [Duration Type: E]</i></p>	<p>Order is partially filled, the remaining is killed.</p> <p><i>Sends a KE message [Status: X] Sends 1 NT message</i></p> <p><i>For Strategy Sends 1 NT message and 1 NL message per leg</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent For strategy: FS or HS message is sent</i></p> <p><b>Trade sent.</b></p> <p><i>A C/CF message is sent</i></p> <p><b>Strategy:</b></p> <p><i>A CS message is sent A C/CF message per leg is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-07	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a limit order with a Clearing Instruction.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Sell Limit Order 40@2.25 with a Clearing Instruction, for instrument INST1.</p> <p><i>Sends an OE message:</i> [Clearing Instruction: anything]</p>	<p>Order is booked.</p> <p><i>Sends a KE message</i> [Status: ]</p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>Strategy: An HS message is sent</i></p>

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-08	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a limit order with Owner Data			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy Limit Order 40@2.25 with Owner Data, for instrument INST1.</p> <p><i>Sends an OE message:</i> [Owner Data: anything]</p>	<p>Order is booked.</p> <p><i>Sends a KE message</i> [Status: ]</p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>Strategy: An HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-09	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Market any price order that gets filled at 2 different prices.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. Group for instrument INST1 must be in 'Continuous Trading' mode.			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<u>LSE</u> : Enters 2 orders: Buy 10@2.50, 15@2.60.		Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>Strategy: An HS message is sent</i>
2	<u>Client</u> : Enters a Sell Market any price Order for 20 contracts for instrument INST1. <i>Sends an OE message: [Price type: W]</i>	Order is filled at 2 different prices 10@2.50 and 10@2.60. <i>Sends 2 NT messages</i>  <i>Strategy:</i> <i>2 NT messages each followed by 1 NL message per leg</i>	Trade sent. <i>2 C/CF message are sent</i> <i>Strategy: 2 CS are sent</i> <i>Per Leg: C or CF message is sent</i>  Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>Strategy: An HS is sent</i>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-10	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Minimum Fill volume order that cannot be filled.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy Limit Order 10@2.40 for instrument INST1 with a minimum fill volume of 5.</p> <p><i>Sends an OE message:</i> [Quantity Term: M] [Additional Quantity: 5]</p>	<p>Order is eliminated because it cannot be filled for the specified volume.</p> <p><i>Sends a KE message:</i> [Status: E]</p>	



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-11	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Minimum Fill volume order that is partially filled.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Sell Limit Order 20@2.00 for instrument INST1 with a minimum fill volume of 10.</p> <p><i>Sends an OE message:</i> [QuantityTerm: M] [Additional Quantity: 10]</p>	<p>Order is partially traded and the remaining quantity is booked 10@2.00.</p> <p><i>Sends a KE message:</i> [Status: ] For Strategy <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i></p>	<p>Trade sent. <i>A C/CF message is sent</i></p> <p><i>Strategy:</i> <i>A CS message is sent</i> <i>A C/CF message per leg is sent</i></p> <p>Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-12	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Stop Order and being able to handle it when it gets triggered.			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. The INST21 needs to allow Stop Orders.</li> <li>2. The market for instrument INST21 must be set to [30@2.00 – 10@2.50].</li> <li>3. The last Price or the previous day's close for INST21 must be greater than 2.00.</li> </ol>			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a Sell Stop Order 9@2.00 for instrument INST21, trigger price 2.10.</p> <p><i>Sends an OE message: [Additional Price: 2.10] [Special Price Term: S]</i></p>	<p>Order is accepted and booked.</p> <p><i>Sends a KE message [Status: ]</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>
2	<p><u>LSE:</u> Enters an order on INST21 to sell 25@2.00.</p>	<p>LSE Order is accepted and 25 traded at 2.00 against the booked order.</p> <p>The client order is triggered and traded 5@2.00.</p> <p><i>Sends an NT message</i></p> <p><i>For Strategy Sends 1 NT message and 1 NL message per leg</i></p> <p>The remaining 4 contracts are booked at 2.00.</p> <p><i>Sends a KE message [Status: ]</i></p>	<p>Trade sent.</p> <p><i>A C/CF message is sent</i></p> <p><i>Strategy: 1 CS are sent and 1 C/CF message per leg</i></p> <p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-13	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a House order.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [12@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy Limit Order 100@2.40, House for the instrument INST1.</p> <p><i>Sends an OE message:</i>  <i>[Price type: L]</i>  <i>[Account type: 2]</i></p>	<p>Order is booked.</p> <p><i>Sends a KE message</i>  <i>[Status: ]</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation		<b>ID #:</b> ORD-14	<b>Requirement:</b> Optional
<b>Description:</b> Entering a Market Maker Limit Order.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><b>Client:</b> Enters a Buy Limit Order 100@2.40, Pro, for instrument INST1.</p> <p><i>Sends an OE message:</i></p> <p>[Price type: L]</p> <p>[Account Type: 4]</p>	<p>Order is booked.</p> <p><i>Sends a KE message</i></p> <p>[Status: ]</p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>



The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-15	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Non-Segregated Client Limit Order.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy Limit Order 100@2.40, Pro, for instrument INST1.</p> <p><i>Sends an OE message:</i> [Account Type: 5]</p>	<p>Order is booked</p> <p><i>Sends a KE message</i> [Status: ]</p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-16	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Limit Order with a Disclosed quantity.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy Limit Order 30@2.05 with a Disclosed quantity of 25 for instrument INST1.</p> <p><i>Sends an OE message:</i> [Quantity Term: D] [Additional Quantity: 25]</p>	<p>Order is accepted and booked and only 25 contracts are shown.</p> <p><i>Sends a KE message</i> [Status: ]</p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-17	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Limit Order for a Strategy (spread) that gets traded ( <b>Trade in Strategy Book</b> )			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. The instrument INST24 is a strategy and contains 2 legs (spread INST22 – INST23)</li> <li>2. The market for instrument INST24 must be set to [10@2.00 – 10@2.50].</li> <li>3. The market for instrument INST22 (1<sup>st</sup> leg of spread) must be set to [5@3.20 – 10@3.30].</li> <li>4. The market for instrument INST23 (2<sup>nd</sup> leg of spread) must be set to [10@1.00 – 10@1.10].</li> </ol>			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<u>Client:</u> Enters a Sell Limit Order 10@2.00 for instrument INST24.	<p>Order is accepted and traded against the client order.</p> <p><i>Sends an NT message for the strategy and 1 NL message per leg</i></p> <p>Trade sent.</p> <p><i>1 NT message for the spread, followed by 1 NL for each leg</i></p>	<p>Trade sent.</p> <p><i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p> <p><i>For the legs: C/CF [PriceIndicatorMarket = P] message is sent per leg</i></p> <p>Strategy Quote or Market Depth sent.</p> <p><i>An FS or HS message is sent</i></p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-18	<b>Requirement:</b> Optional	
<b>Description:</b> Entering a Limit Order for a Strategy that gets traded against leg markets ( <b>Implied Trade</b> )			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>Instrument INST24 is a strategy (spread INST22 – INST23) with legs INST22 and INST23</li> <li>The market for instrument INST22 must be set to [10@2.00 – 10@2.50].</li> <li>The market for instrument INST23 must be set to [5@1.00 – 5@1.50].</li> <li>The market for the spread INST24 must be set to [15@0.60 – 15@1.60].</li> <li>The implied market on INST24 is [5@0.50 – 5@1.50].</li> </ol>			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters a Buy Limit Order 5@1.50 for instrument INST24. Sends an OE message:</p>	<p>Order is accepted. Sends a KE message [Status: ]</p> <p>Trade sent. 1 NT message for the spread, followed by 1 NL for each leg</p>	<p>Trade sent. For the legs: C/CF [PriceIndicatorMarket = I] message is sent per leg</p> <p>NOTE: No CS message is sent when strategy trades implied</p> <p>Quote or Market Depth sent. An F/FF or H/HF message is sent for each leg instrument For strategy: FS or HS message is sent</p>



## The driving force for derivatives

<b>Type:</b> Order Creation	<b>ID #:</b> ORD-019	<b>Class:</b> Mandatory	
<b>Description:</b> Entering a Market Order at instrument limit (Min/Max) price.			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. The market for instrument INST1 must be set to [12@0.0001 – 10@99999.5000]; no other orders must be in the Book.</li> <li>2. Group for instrument INST1 must be in 'Continuous Trading' mode.</li> <li>3. Adjust Min/Max for Product/instrument in Configuration manager</li> </ol>			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information - HSVF
1	<p><u>Client:</u> Enters a Buy @0.0001 for 20 contracts for instrument INST1.</p> <p><u>Client:</u> Enters a Sell market for 12 contracts for instrument INST1.</p> <p><i>Sends an OE message: [Price type: M]</i></p>	<p>Order is accepted and trades completely</p> <p><i>Sends a KE message [Status:X]</i></p> <p>Trade Sent</p> <p><i>Sends 1 NT message</i></p> <p><i>For Strategy</i></p> <p><i>Sends 1 NT message and</i></p> <p style="text-align: center;"><i>1 NL message per leg</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent.</p> <p><i>A C/CF message is sent</i></p> <p><i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p>
2	<p><u>Client:</u> Enters a Sell @99999.5000 for 15 contracts for instrument INST1.</p> <p><u>Client:</u> Enters a Buy market for 15 contracts for instrument INST1.</p> <p><i>Sends an OE message: [Price type: M]</i></p>	<p>Order is accepted and trades completely</p> <p><i>Sends a KE message [Status: X]</i></p> <p>Trade Sent</p> <p><i>Sends 1 NT message</i></p> <p><i>For Strategy</i></p>	<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent.</p> <p><i>A C/CF message is sent</i></p>



## The driving force for derivatives

		<p><i>Sends 1 NT message and 1 NL message per leg</i></p>	<p><i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p>
--	--	---	---



The driving force for derivatives

#### 4.4 Order Cancellation Test Cases

<b>Type:</b> Order Cancellation		<b>ID #:</b> CXL-01	<b>Requirement:</b> Mandatory	
<b>Description:</b> Cancelling an order.				
<b>Comments:</b>				
<b>Prerequisites</b>				
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].				
Step	Input Specifications	Expected Results		
		Trading Engine Responses (SAIL)	Market Information (HSVF)	
1	<u>Client:</u> Enters a regular Sell order 10@2.20 for instrument INST1. <i>Sends an OE message</i>	Order is booked. <i>Sends a KE message: [Order ID: x] [Status: ]</i>	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent For strategy: FS or HS message is sent</i>	
2	<u>Client:</u> Cancels the previous order. <i>Sends an XE message: [Cancelled Order ID: x]</i>	Order is cancelled. <i>Sends a KZ message [Status: "A"]</i>	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent For strategy: FS or HS message is sent</i>	



The driving force for derivatives

<b>Type:</b> Order Cancellation		<b>ID #:</b> CXL-02	<b>Requirement:</b> Mandatory
<b>Description:</b> Cancelling a partially filled order.			
<b>Comments:</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a regular Buy order 30@2.50 for instrument INST1. Sends an OE message</p>	<p>Order is booked. Sends a KE message: [Order ID: x] [Status: “ ”] Trade 10@2.50 Sends an NT message</p> <p>For Strategy Sends 1 NT message and  1 NL message per leg</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p> <p>Trade sent. A C/CF message is sent</p> <p>For strategy: CS message is sent followed by 1 C/CF message per leg</p>
2	<p><u>Client:</u> Cancels the previous order. Sends an XE message: [Cancelled Order ID: x]</p>	<p>The remainder of the order is cancelled. Sends a KZ message [Status: “A”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>



The driving force for derivatives

#### 4.5 Order Modification Test Cases

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-01	<b>Requirement:</b> Mandatory	
<b>Description:</b> Modifying the price of an order; quantity remains unchanged.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment.			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client:</u> Enters a regular Sell order 2000@2.25. Sends an OE message	Order is booked. Sends a KE message: [Order ID: x [Status: ]	Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent
2	<u>Client:</u> Modifies the previous order 2000@2.20. Sends an OM message: [Quantity Sign: =] [Quantity: 2000] [Modified Order ID: x]	Order is booked. Sends a KM message: [Order ID: y] [Status: ]	Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent
3	<u>Client:</u> Cancels the order. Sends an XE message: [Cancelled Order ID: y]	Order is cancelled. Sends a KZ message: [Status: A]	Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent



## The driving force for derivatives

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-02	<b>Requirement:</b> Mandatory	
<b>Description:</b> Modifying the quantity (absolute) of an order.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment.			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client:</u> Enters a regular Sell order 1@2.25. <i>Sends an OE message</i>	Order is accepted and booked at 1@2.25. <i>Sends a KE message:</i> [Order ID: x] [Status: “ ”]	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>
2	<u>Client:</u> Modifies the previous order 20@2.25. <i>Sends an OM message:</i> [Quantity Sign: =] [Quantity: 20] [Modified Order ID: x]	Order is booked. Modification is accepted and the Quantity is now 20. <i>Sends a KM message:</i> [Order ID: y] [Status: “ ”]	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>
3	<u>Client:</u> Cancels the order. <i>Sends an XE message:</i> [Cancelled Order ID: y]	Order is cancelled. <i>Sends a KZ message:</i> [Status: A]	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>



## The driving force for derivatives

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-03	<b>Requirement:</b> Optional	
<b>Description:</b> Modifying the quantity (delta) and the price of a partially filled order.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment.			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a regular Buy order 21@2.50. Sends an OE message</p>	<p>Order is accepted and booked at 21@2.50. Sends a KE message: [Order ID: x]</p> <p>Trade 10@2.50 Sends an NT message (partial fill) For Strategy Sends 1 NT message and  1 NL message per leg</p>	<p>Quote or Market Depth sent. An /FFF or H/HF message is sent For strategy: FS or HS message is sent</p> <p>Trade sent. A C/CF message is sent For strategy: CS message is sent followed by 1 C/CF message per leg</p>
2	<p><u>Client:</u> Modifies the previous order 15@2.25. Sends an OM message: [Quantity Sign: +] [Quantity: 4] [Modified Order ID: x]</p>	<p>Order is booked. Modification is accepted and the Quantity is now 15 and price is 2.25. Sends a KM message: [Order ID: y]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>
3	<p><u>Client:</u> Cancels the order. Sends an XE message: [Cancelled Order ID: y]</p>	<p>Order is cancelled. Sends a KZ message: [Status: A]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>



## The driving force for derivatives

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-04	<b>Requirement:</b> Mandatory	
<b>Description:</b> Modifying the quantity (absolute) and the price of a partially filled order.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment.			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a regular Buy order 21@2.50. Sends an OE message</p>	<p>Order is accepted and booked at 21@2.50. Sends a KE message: [Order ID: x] [Status: “ “]</p> <p>Trade 10@2.50 Sends an NT message (partial fill)</p> <p>For Strategy Sends 1 NT message and 1 NL message per leg</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p> <p>Trade sent. A C/CF message is sent</p> <p>For strategy: CS message is sent followed by 1 C/CF message per leg</p>
2	<p><u>Client:</u> Modifies the previous order 25@2.60. Sends an OM message: [Quantity Sign: =] [Quantity: 25] [Modified Order ID: x]</p>	<p>Order is booked. Modification is accepted and the Quantity is now 25 and price is 2.60. Sends a KM message: [Order ID: y] [Status: “ “]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>
3	<p><u>Client:</u> Cancels the order. Sends an XE message: [Cancelled Order ID: y]</p>	<p>Order is cancelled. Sends a KZ message [Status: “A”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>



## The driving force for derivatives

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-05	<b>Requirement:</b> Mandatory	
<b>Description:</b> Modifying an order that has been previously modified and partially filled.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment.			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a regular Buy Order 21@2.50. Sends an OE message</p>	<p>Order is accepted and booked at 21@2.50. Sends a KE message: [Order ID: x] [Status: “ ”] Trade 10@2.50 Sends an NT message (partial fill) For Strategies, sends NL message per leg</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p> <p>Trade sent. A C/CF message is sent For strategy: CS message is sent followed by 1 C/CF message per leg</p>
2	<p><u>Client:</u> Modifies the previous order 21@2.50. Sends an OM message: [Quantity Sign: =] [Quantity: 21] [Modified Order ID: x]</p>	<p>Order is booked. Modification is accepted and the Quantity is now 21 and price is 2.50. Sends a KM message: [Order ID: y] [Status: “ ”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>
3	<p><u>Client:</u> Modifies the previous order 21@2.40. Sends an OM message: [Quantity Sign: =] [Quantity: 21] [Modified Order ID: y]</p>	<p>Order is booked. Modification is accepted and the Quantity is now 21 and price is 2.40. Sends a KM message: [New Order ID: z] [Status: “ ”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>



## The driving force for derivatives

4	<p><u>Client</u>: Cancels the order. Sends an XE message: [Cancelled Order ID: z]</p>	<p>Order is cancelled. Sends a KZ message [Status: A “]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>
---	---	---	---



## The driving force for derivatives

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-06	<b>Requirement:</b> Optional	
<b>Description:</b> Modifying a Market Top order and assigning it a limit price.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment. <b>(Conditional to ORD01)</b>			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 12@2.50]; no other orders must be in the book.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a Buy Market order for 20 Contracts.</p> <p><i>Sends an OE message:</i> [Price type: M]</p>	<p>Sends a KE message: [Order ID: x] [Status: “ ”]</p> <p>Trade 12@2.50 and the remaining 8@2.50 is booked.</p> <p><i>Sends an NT message (partial fill)</i> <i>For Strategy</i> <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i></p>	<p>Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i>  <i>For strategy: FS or HS message is sent</i></p> <p>Trade sent. <i>A C/CF message is sent</i> <i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p>
2	<p><u>Client:</u> Modifies the previous order 9@2.40.</p> <p><i>Sends an OM message:</i> [Quantity Sign: +] [Quantity: 1] [Price type: L] [Modified Order ID: x]</p>	<p>Order is booked. Modification is accepted and the Quantity is now 9 and price is 2.40.</p> <p><i>Sends a KM message:</i> [Order ID: y] [Status: “ ”]</p>	<p>Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i>  <i>For strategy: FS or HS message is sent</i></p>



## The driving force for derivatives

3	<p><u>Client</u>: Cancels the previous order. Sends an XE message: <i>[Cancelled Order ID: y]</i></p>	<p>Order is cancelled. Sends a KZ message <i>[Status: "A"]</i></p>	<p>Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i></p>
---	---	--	---



## The driving force for derivatives

<b>Type:</b> Order Modification	<b>ID #:</b> MOD-07	<b>Requirement:</b> Optional	
<b>Description:</b> Modifying the quantity (delta) of an order.			
<b>Comments:</b> The order is cancelled to “clear” the testing environment.			
<b>Prerequisites</b>			
The market for instrument INST1 must be set to [10@2.00 – 10@2.50].			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters a regular Sell order 21@2.25. Sends an OE message</p>	<p>Order is accepted and booked at 21@2.25. Sends a KE message: [Order ID: x] [Status: “ ”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>
2	<p><u>Client:</u> Modifies the previous order 20@2.25. Sends an OM message: [Quantity Sign: -] [Quantity: 1] [Modified Order ID: x]</p>	<p>Order is booked. Modification is accepted and the Quantity is now 20. Sends a KM message: [Order ID: y] [Status: “ ”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>
3	<p><u>Client:</u> Cancels the order. Sends an XE message: [Cancelled Order ID: y]</p>	<p>Order is cancelled. Sends a KZ message [Status: “A”]</p>	<p>Quote or Market Depth sent. An F/FF or H/HF message is sent For strategy: FS or HS message is sent</p>



The driving force for derivatives

#### 4.6 Request for Quote Test Cases

<b>Type:</b> Request for Quote		<b>ID #:</b> RFQ-01	<b>Requirement:</b> Optional	
<b>Description:</b> Sending a Request for Quote message.				
<b>Comments:</b>				
<b>Prerequisites</b>				
Step	Input Specifications	Expected Results		
		Trading Engine Responses (SAIL)	Market Information (HSVF)	
1	<u>Client:</u> Enters a Request for Quote for the instrument INST1 for any quantity. <i>Sends an RQ message</i>	Request for Quote is accepted. <i>Sends a KO message</i>	Request for Quote sent. <i>A D/DF message is broadcasted.</i>	



## The driving force for derivatives

<b>Type:</b> Request for Quote	<b>ID #:</b> RFQ-02	<b>Requirement:</b> Optional	
<b>Description:</b> Responding to a Request for Quote message.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. No market for instrument INST1. 2. Client is connected.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>LSE</u> : Enters a Request for Quote for the instrument INST1 for any quantity.	Request for Quote is accepted.	Request for Quote message received and dispatched to external participants on the HSVF Market feed.  Request for Quote sent. <i>A D/DF message is sent.</i>
2	<u>Client</u> : Responds by posting a market for instrument INST1. <i>Sends an OE or a Q&lt;i&gt;</i>	Market is accepted. <i>Sends a KE or an LA message</i>	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>



The driving force for derivatives

#### 4.7 Bulk Quote Test Cases

<b>Type:</b> Bulk Quote		<b>ID #:</b> BUQ-01		<b>Requirement:</b> Mandatory for Market Makers	
<b>Description:</b> Entering quotes.					
<b>Comments:</b>					
<b>Prerequisites</b>					
<ol style="list-style-type: none"> <li>1. No market for instrument INST1.</li> <li>2. Participant must be configured as Market Maker on group GRP1.</li> <li>3. Participant must send Clearing Data message BD ( for traderID/GroupID )</li> </ol>					
Step	Input Specifications	Expected Results			
		Trading Engine Responses (SAIL)		Market Information (HSVF)	
1	<p><u>Client:</u> Enters 2 quotes (1 bid and 1 ask) on INST1, Bid = 10@1.00, Ask=10@1.20.</p> <p><i>Sends a BD message (if not already done)</i></p> <p><i>Sends a Q&lt;i&gt; message</i></p>	<p>Quotes are accepted and booked.</p> <p><i>Sends a KD message</i></p> <p><i>Sends an LA message</i></p>		<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>	
2	<p><u>LSE:</u> Enters a regular Sell order 5@0.90 for instrument INST1.</p>	<p>Order is accepted Trade 5@1.00.</p> <p><i>Sends an NT message</i></p> <p><i>For Strategy</i></p> <p><i>Sends 1 NT message and</i></p> <p style="text-align: center;"><i>1 NL message per leg</i></p> <p>The market is now [5@1.00 – 10@1.20].</p>		<p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent.</p> <p><i>A C/CF message is sent</i></p> <p><i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p>	



## The driving force for derivatives

<b>Type:</b> Bulk Quote	<b>ID #:</b> BUQ-02	<b>Requirement:</b> Mandatory for Market Makers	
<b>Description:</b> Modifying the price on quotes when some have been rejected.			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. No market for instruments in group GRP1.</li> <li>2. Instrument INST10 has to be forbidden.</li> <li>3. Participant must be configured as Market Maker on group GRP1.</li> <li>4 Participant must send Clearing Data message BD ( for traderID/GroupID )</li> </ol>			
		<b>Expected Results</b>	
<b>Step</b>	<b>Input Specifications</b>	<b>Trading Engine Responses (SAIL)</b>	<b>Market Information (HSVF)</b>
1	<p><u>Client:</u> Enters quotes for all instruments of GRP1. At least 101 instruments must be quoted on both sides with bids of 1000@100.00 and asks of 900@100.50. Only one bulk quote message must be sent.</p> <p><i>Sends a Q&lt;i&gt; message</i></p>	<p>All quotes are accepted and booked except the 2 on the forbidden instrument. The markets for selected instruments in group GRP1 are now [1000@100.00 – 900@100.50].</p> <p><i>Sends an LA message: [Number of quotes in error: 002] [Error code: 1004]</i></p>	<p>Quote or Market Depth sent. <i>Several F/FF or H/HF messages are broadcasted</i></p> <p><i>For strategy: Several FS or HS message are broadcasted</i></p>
2	<p><u>Client:</u> Modifies the price of all quotes previously accepted.</p> <p><i>Sends a Q&lt;i&gt; message</i></p>	<p>Quotes are modified. No error message is returned. Market is now: [1000@100.10 – 900@100.30]</p> <p><i>Sends an LA message</i></p>	<p>Quote or Market Depth sent. <i>Several F/FF or H/HF messages are broadcasted</i></p> <p><i>For strategy: Several FS or HS message are broadcasted</i></p>



## The driving force for derivatives

<b>Type:</b> Bulk Quote	<b>ID #:</b> BUQ-03	<b>Requirement:</b> Mandatory for Market Makers	
<b>Description:</b> Modifying the quantity for quotes.			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. No market for instruments in group GRP1.</li> <li>2. Participant must be configured as Market Maker on group GRP1.</li> <li>3. Participant must send Clearing Data message BD ( for traderID/GroupID )</li> </ol>			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters 4 quotes (2 bid and 2 ask) on instruments of group GRP1, Bid = 10@1.00, Ask = 10@1.20. <i>Sends a Q&lt;i&gt; message</i></p>	<p>Quotes are accepted and booked. The markets are now: INST1: [10@1.00 – 10@1.20] INST2: [10@1.00 – 10@1.20] <i>Sends an LA message</i></p>	<p>Quote or Market Depth sent. <i>Two F/FF or H/HF messages are sent</i></p> <p><i>For strategy: Two FS or HS message are sent</i></p>
2	<p><u>LSE:</u> Enters a regular Buy order 10@1.20 for instrument INST1.</p>	<p>Order is accepted. Trade 10@1.20. <i>Sends an NT message</i> <i>For Strategy</i> <i>Sends 1 NT message and</i></p> <p style="text-align: center;"><i>1 NL message per leg</i></p> <p>INST1: [10@1.00 – ] INST2: [10@1.00 – 10@1.20]</p>	<p>Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p> <p>Trade sent. <i>A C/CF message is sent</i> <i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p>
3	<p><u>Client:</u> Sets quantities to 20 on both sides of INST1 and INST2. <i>Sends a Q&lt;i&gt; message with [Quote Qty: +20] for the Ask side of INST1 and [Quote Qty: +10] for the other three quotes.</i></p>	<p>Quotes are modified. Market are now INST1: [20@1.00 – 20@1.20] INST2: [20@1.00 – 20@1.20] <i>Sends an LA message</i></p>	<p>Quote or Market Depth sent. <i>Two F/FF or H/HF messages are sent</i></p> <p><i>For strategy: Two FS or HS message are sent</i></p>



## The driving force for derivatives

<b>Type:</b> Bulk Quote	<b>ID #:</b> BUQ-04	<b>Requirement:</b> Mandatory for Market Makers	
<b>Description:</b> Cancelling all quotes (Global Cancellation, formerly known as "Panic Quote").			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. No market for instruments in group GRP1.</li> <li>2. Participant must be configured as Market Maker on group GRP1.</li> <li>3. Participant must send Clearing Data message BD ( for traderID/GroupID )</li> </ol>			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client:</u> Enters 40 quotes (20 bid and 20 ask) on instruments of group GRP1, Bid = 10@1.00, Ask = 10@1.20. <i>Sends a Q&lt;i&gt; message</i>	Quotes are accepted and booked. The markets are now [10@1.00 – 10@1.20] for all instruments. <i>Sends an LA message</i>	Quote or Market Depth sent. <i>Twenty (20) F/FF or H/HF messages are sent</i>  <i>For strategy: Twenty (20)FS or HS message are sent</i>
2	<u>LSE:</u> Enters a regular Sell order 10@1.00 for instrument INST1.	Order is accepted. Trade 10@1.00. <i>Sends an NT message</i> <i>For Strategy</i> <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i>	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>  Trade sent. <i>A C/CF message is sent</i> <i>For strategy: CS message is sent followed by 1 C/CF message per leg</i>
3	<u>Client:</u> Cancels all quotes with a GC message. <i>Sends a GC message</i>	Quotes are cancelled. Market for instrument INST1 is now [0@0.00 – 10@1.00]. <i>Sends a KG message</i>	Quote or Market Depth sent. <i>Twenty (20) F/FF or H/HF messages are sent</i> <i>For strategy: Twenty (20)FS or HS message are sent</i>



## The driving force for derivatives

<b>Type:</b> Bulk Quote	<b>ID #:</b> BUQ-05	<b>Requirement:</b> Mandatory for Market Makers	
<b>Description:</b> Handling unsolicited cancellation of all quotes.			
<b>Comments:</b>			
<b>Prerequisites</b>			
<ol style="list-style-type: none"> <li>1. No market for instruments in group GRP1.</li> <li>2. Participant must be configured as Market Maker on group GRP1.</li> <li>3. Participant must send Clearing Data message BD (for traderID/GroupID )</li> </ol>			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<p><u>Client:</u> Enters 40 quotes (20 bid and 20 ask) on instruments of group GRP1, Bid = 10@1.00, Ask = 10@1.20.</p> <p><i>Sends a Q&lt;i&gt; message</i></p>	<p>Quotes are accepted and booked.</p> <p><i>Sends an LA message</i></p>	<p>Quote or Market Depth sent.</p> <p><i>Twenty (20) F/FF or H/HF messages are sent</i></p> <p><i>For strategy: Twenty (20) FS or HS message are sent</i></p>
2	<p><u>LSE:</u> Enters a regular Buy order 10@1.30 for instrument INST1.</p>	<p>Order is accepted and is traded against the booked quotes. Trade 10@1.20.</p> <p><i>Sends an NT message</i></p> <p><i>For Strategy</i></p> <p><i>Sends 1 NT message and</i></p> <p style="text-align: center;"><i>1 NL message per leg</i></p>	<p>Trade sent.</p> <p><i>A C/CF message is sent</i></p> <p><i>For strategy: CS message is sent followed by 1 C/CF message per leg</i></p> <p>Quote or Market Depth sent.</p> <p><i>An F/FF or H/HF message is sent</i></p> <p><i>For strategy: FS or HS message is sent</i></p>
3	<p><u>LSE:</u> Cancels all quotes for the participant.</p>	<p>Quotes are cancelled.</p> <p><i>Sends an NP message</i></p>	<p>Quote or Market Depth sent.</p> <p><i>Twenty (20) F/FF or H/HF messages are sent</i></p> <p><i>For strategy: Twenty (20) FS or HS message are sent</i></p>



The driving force for derivatives

#### 4.8 Trade management Test Cases

<b>Type:</b> Trade Management	<b>ID #:</b> TRD-01	<b>Requirement:</b> Mandatory	
<b>Description:</b> Handling many fills for the same order.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. The market for instrument INST1 must be set to [12@2.00 – 10@2.50]. 2. Group for instrument INST1 must be in 'Continuous Trading' mode.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client:</u> Enters a Sell order or a quote for instruments INST1 75@2.40. <i>Sends an OE message</i>	Order is accepted. <i>Sends a KE or an LA message</i>	Quote or Market Depth sent. <i>An F/FF or H/HF message is sent</i> <i>For strategy: FS or HS message is sent</i>
2	<u>LSE:</u> Enters 10 Buy orders for instrument: INST1 2@MKT, 3@MKT, 4@MKT, 5@MKT, 6@MKT, 7@MKT, 8@MKT, 9@MKT, 10@MKT, 11@MKT.	10 Trades: 2@2.40, 3@2.40, 4@2.40, 5@2.40, 6@2.40, 7@2.40, 8@2.40, 9@2.40, 10@2.40, 11@2.40. <i>Sends 10 NT messages</i>  <i>For each of the 10 strategies</i> <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i>  Market for instrument INST1 is now [12@2.00 – 10@2.40].	Trade sent. <i>A C/CF message is sent for each trade</i>  <i>For strategy: CS message is sent followed by 1 C/CF message per leg for each strategy trade</i>



## The driving force for derivatives

<b>Type:</b> Trade Management	<b>ID #:</b> TRD-02	<b>Requirement:</b> Mandatory	
<b>Description:</b> Handling manual cancellation of a regular trade by the Market Operation Center.			
<b>Comments:</b>			
<b>Prerequisites</b>			
Execution of test case TRD-01			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>LSE</u> : Manually cancels the first and the last Trades from Test Case TRD-01 (2@2.40 and 11@2.40).	<p>The 2 trades are cancelled.</p> <p><i>Sends 2 NX messages</i></p> <p><i>For each of the 2 Strategies</i></p> <p><i>Sends 1 NX message and</i></p> <p style="text-align: center;"><i>1 NY message per leg</i></p>	<p>Trade Cancellation and Summary.</p> <p><i>Two (2) I/IF and N/NF messages are sent</i></p> <p><i>For Strategy: Two (2) IS and NS messages are sent</i></p>



## The driving force for derivatives

<b>Type:</b> Trade Management	<b>ID #:</b> TRD-03	<b>Requirement:</b> Optional	
<b>Description:</b> Handling manual trade creation and cancellation.			
<b>Comments:</b>			
<b>Prerequisites</b>			
<b>Expected Results</b>			
Step	Input Specifications	Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>LSE</u> : Creates a manual trade for instrument INST1 by using the TraderID of the client on both sides of the trade.	A first trade is created. <i>Sends one NT message</i> <i>For Strategy</i> <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i>	Trade sent. <i>A C/CF message is sent.</i> <i>For strategy: CS message is sent followed by 1 C/CF message per leg</i>
2	<u>LSE</u> : Creates a manual trade for instrument INST1 by using the TraderID of the client on one side and a different TraderID for the client on the opposite side of the trade.	A second trade is created <i>Sends one NT message</i> <i>For Strategy</i> <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i>	Trade sent <i>A C/CF message is sent</i> <i>For strategy: CS message is sent followed by 1 C/CF message per leg</i>
3	<u>LSE</u> : Cancel trades created in Steps 1 and 2.	Trades are cancelled. <i>2 NX messages are sent.</i>  <i>For each of the 2 Strategies</i> <i>Sends 1 NX message and</i>  <i>1 NY message per leg</i>	Trades Cancellation. <i>I/IF and N/NF messages sent</i>  <i>For Strategy: IS and NS messages are sent</i>



## The driving force for derivatives

<b>Type:</b> Trade Management	<b>ID #:</b> TRD-04	<b>Requirement:</b> Mandatory	
<b>Description:</b> Handling manual cancellation of a regular trade on a Strategy.			
<b>Comments:</b>			
<b>Prerequisites</b>			
1. The market for instrument INST22 must be set to [10@2.00 – 10@2.50]. 2. INST22 is a strategy and contains 2 legs.			
Step	Input Specifications	Expected Results	
		Trading Engine Responses (SAIL)	Market Information (HSVF)
1	<u>Client:</u> Enters a Sell Limit Order 5@2.00 for instrument INST22 <i>Sends an OE message:</i>	Order is accepted and traded. <i>Sends a KE message</i>  <i>For Strategy</i> <i>Sends 1 NT message and</i>  <i>1 NL message per leg</i>	Strategy Trade sent. <i>A CS message is sent.</i>  Strategy Quote or Strategy Market Depth sent. <i>An FS or HS message is sent</i>
2	<u>LSE:</u> Cancels trade created in Step 1.	Trade is cancelled. <i>Sends 1 NX message and</i>  <i>1 NY message per leg</i>	Strategy Trade Cancellation and Summary. <i>An IS and an NS message is sent</i>



Copyright © September 2009 London Stock Exchange plc.  
Registered in England and Wales No. 2075721.

London Stock Exchange plc has used all reasonable efforts to ensure that the information contained in this publication is correct at the time of going to press, but shall not be liable for decisions made in reliance on it.

London Stock Exchange, the coat of arms device and Extranex are registered trade marks of London Stock Exchange plc.  
UnaVista is a trade mark of London Stock Exchange plc.

London Stock Exchange  
10 Paternoster Square  
London EC4M 7LS  
Telephone: +44 (0)20 7797 1000  
[www.londonstockexchange.com](http://www.londonstockexchange.com)

REF/ABS/193



**London**  
Stock Exchange Group