

# Trading Services Enhancements

April 2001

Detailed guide



*London* **STOCK EXCHANGE**

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# Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>4</b>
1.1	DOCUMENT SCOPE .....	4
<b>2</b>	<b>INTERNATIONAL ORDER BOOK .....</b>	<b>5</b>
2.1	WHAT ARE WE CHANGING? .....	5
2.2	WHY ARE WE MAKING THE CHANGES? .....	6
2.3	HOW WILL IT WORK? .....	6
<b>3</b>	<b>INTERNATIONAL RETAIL SERVICE.....</b>	<b>10</b>
3.1	WHAT WILL THIS SERVICE OFFER?.....	10
3.2	WHY IS THIS SERVICE BEING INTRODUCED?.....	10
3.3	HOW WILL IT WORK? .....	11
<b>4</b>	<b>SEAQ CROSSES .....</b>	<b>19</b>
4.1	WHAT ARE WE CHANGING? .....	19
4.2	WHY ARE WE MAKING THE CHANGES? .....	20
4.3	HOW WILL IT WORK? .....	20
<b>5</b>	<b>RECONFIGURATION OF SETS PRICES BROADCAST DATA GROUP.....</b>	<b>25</b>
5.1	BACKGROUND.....	25
5.2	WHAT ARE WE CHANGING? .....	25
<b>6</b>	<b>TECHNICAL IMPLICATIONS .....</b>	<b>26</b>
6.1	INTRODUCTION.....	26
6.2	TRADING SYSTEM CONFIGURATION.....	28
6.3	USE OF AUCTIONS.....	35
6.4	MARKET MECHANISM TYPES.....	37
6.5	CONTRA TRADING .....	40
6.6	TRADING PARAMETERS .....	41
6.7	ADVISORY CODES .....	41
6.8	RECOMMENDED DISPLAY GUIDELINES .....	42
6.9	BROADCAST DATA GROUPS.....	43
<b>7</b>	<b>IMPLEMENTATION.....</b>	<b>48</b>
7.1	TRADING SERVICES ENHANCEMENTS APRIL 2001.....	48
7.2	CONFORMANCE AND CUSTOMER TESTING .....	48
	<b>APPENDIX 1: INTERNATIONAL ORDER BOOK SECURITIES .....</b>	<b>53</b>
	<b>APPENDIX 2: TRADING PARAMETERS.....</b>	<b>54</b>
	<b>APPENDIX 3: INTERNATIONAL ORDER BOOK – PERIOD RULES.....</b>	<b>56</b>
	<b>APPENDIX 4: INTERNATIONAL RETAIL SERVICE– PERIOD RULES.....</b>	<b>57</b>

<b>APPENDIX 5: SEAQ – PERIOD RULES .....</b>	<b>58</b>
<b>APPENDIX 6: B45/B46 BDG MAPPING LIVE SERVICE.....</b>	<b>59</b>
<b>APPENDIX 7: TEST INSTRUMENTS .....</b>	<b>60</b>
<b>APPENDIX 8: GLOSSARY OF TERMS.....</b>	<b>61</b>

# Guide to readership

The table below directs readers' attention to the sections most relevant to them.

<b>Section</b>	<b>Readership</b>
Introduction	All readers
International Order Book	Users of SEAQ International, technical teams and compliance officers
International Retail Service	Retail brokers, committed principals, technical teams and compliance officers
SEAQ Crosses	Users of SEAQ, technical teams and compliance officers
Reconfiguration of SETS prices broadcast data group	Technical teams and compliance officers
Technical implications	Technical teams
Implementation	All readers
Appendices	For reference

# 1 Introduction

In October last year the London Stock Exchange made clear its intention to continue to expand and develop its service offering. Plans were set out to continue development of the core trading systems, increase the overall efficiency of the central market and focus on services to support the retail community.

In addition to existing service development plans, such as the introduction of central counterparty in February, informal consultation has taken place over the past three months to refine a number of development proposals. Documents describing some of the changes brought together in this guide have already been distributed.

This document explains these proposals and sets out the full scope of the next release of our Trading and Information systems, called Trading Services Enhancements April 2001, which will underpin the new service offerings.

Compared to previous releases, the technical impact has been kept to a minimum and has been limited to new configurations of existing functionality and the enabling of the committed principal or 'named' order type. The London Stock Exchange has combined these technical changes into a single release to minimise the impact of changes to customers.

In summary this release will:

- introduce an order book for a limited selection of existing SEAQ International securities
- introduce a new International Retail Service in international securities
- enhance the existing SEAQ Auction service

This release will go live on 30 April 2001.

These changes, combined with a new strategy to internationalise our services, will ensure the London Stock Exchange enhances its competitive position and continues to meet the needs of customers.

## 1.1 Document scope

This document covers the detail of the changes that are being made, the business and technical implications, and the implementation time-scales. All the parameters and period timings are for illustrative purposes only. The business parameters, extent of member firm participation and eligible stocks will be confirmed to the market in March 2001.

## 2 International Order Book

This release will enhance the trading service for emerging market securities through the introduction of a limit order book for the most liquid depositary receipts, while the remaining SEAQ International securities will operate on a quote driven basis as they do today.

### 2.1 What are we changing?

#### 2.1.1 Current functionality

SEAQ International is the London Stock Exchange's quote-display mechanism for overseas securities. Registered market makers provide continuous two-way prices to a predominantly institutional marketplace.

#### 2.1.2 Trading Services Enhancements April 2001

This initiative specifically addresses the need to develop the trading service through the introduction of an order book for a number of the more liquid securities currently trading on SEAQ International, and will be based on the existing Stock Exchange Electronic Trading Service ("SETS").

The key features of the order book proposal are:

- introduction of a SETS style order book
- availability of 'named orders'<sup>1</sup> for use by participants to display their identity next to their order if they so choose
- trade reporting and appropriate publication of trades in order book securities both on and off the order book
- initially, up to 40 of the most liquid emerging markets securities eg from Eastern Europe will trade on the order book. The remaining securities will continue trading on the SEAQ International service with market maker quotes.

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<sup>1</sup> Named orders are referred to as committed principal orders in system documentation

**Table 1: Summary of the differences between the new and existing service**

	<b>New service</b>	<b>Existing service</b>
<b>Security coverage</b>	Most liquid depositary receipts <sup>2</sup>	Remaining securities
<b>Price formation mechanism</b>	Public limit order book	Quote-driven SEAQ International (as today)
<b>Execution mechanism</b>	Electronic order matching and telephone dealing	Telephone dealing
<b>Quote/order types</b>	Anonymous and non-anonymous orders	Non-anonymous quotes
<b>Post-trade transparency</b>	Yes	No publication <sup>3</sup>

## **2.2 Why are we making the changes?**

The current market model has been instrumental in making cross border trading in London what it is today. In recent years, the focus of SEAQ International has shifted from developed market trading to emerging market trading. In addition, a need for a more flexible trading mechanism has emerged.

There is strong support for the continued provision of a London based market in SEAQ International securities and a desire to see the introduction of a segmentation to reflect the widely varying liquidity of current SEAQ International securities. The current users of SEAQ International, typically wholesale and institutional broking firms, have highlighted the need to supplement the existing trading mechanism for depositary receipts with the benefits that an order book brings.

The Exchange's objective for its international equity trading service is to provide a central market place that is attractive to issuers, intermediaries and investors alike. This will help London remain the market of choice in these securities. In addition, this service will enable London to capitalise on an increasing interest in issuing and trading, and in particular, to counter the increasing competition from depositary receipts trading elsewhere.

## **2.3 How will it work?**

The most liquid depositary receipts will be placed on an electronic order book with appropriate publication of trades in these securities both on and off the order book.

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<sup>2</sup> See appendix 1 for an indicative list of securities

<sup>3</sup> Except European Equity Market Securities on SEAQ International where trades currently publish



### 2.3.1 The trading day

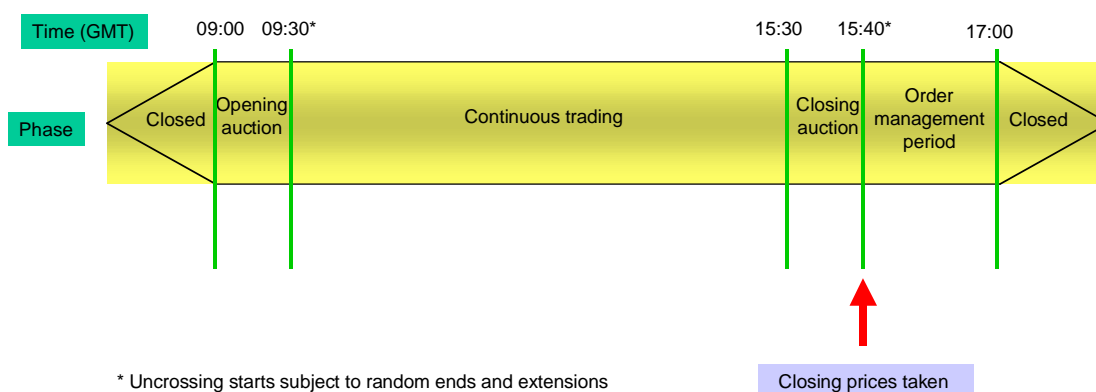
The trading day for the international order book will run from 09:00 to 17:00 with a core continuous trading period from 09:30 to 15:30. The trading schedule will have an opening auction at 09:00 and a closing auction at 15:30 with the potential for market order and price monitoring extensions to auction call periods.

To safeguard the market against excessive price movements, a price monitoring tolerance will be applied during the trading day. Appendix 2 contains details of the proposed price monitoring tolerances.

All auctions will be subject to the same price and volume checks currently used for SETS, albeit with different dynamic tolerances. Each auction will have an auction call period followed by an uncrossing period. International Order Book auctions will be subject to a random end to the auction call period. This will be configured to a maximum of 30 seconds.

The closing auction, will be followed by an order management period during which continuous execution will not be enabled. During this period, participants will be able to enter named orders to advertise their prices. Only named orders will be enabled for entry. No other orders will be enabled, although participants will be able to delete their market and limit orders, if they wish.

**Figure 1: Trading day for the International Order Book**



### 2.3.2 Order entry

Order entry will operate exactly as it does for SETS, except that a previously unused order type will be enabled to allow market participants to enter a named order if they wish.

As the market is primarily institutional, an order lot size will apply. This means that orders can only be entered in multiples of the lot size. In addition, a minimum size will apply to all orders entered. Appendix 2 details the proposed parameter values.

### **Anonymous order types**

All anonymous order types available on SETS will be enabled on the international order book, ie limit, market, at best, fill or kill and execute and eliminate orders.

### **Non-anonymous order type**

A previously unused order type, known as a “**named order**<sup>4</sup>”, will be introduced and will allow any firm to display its identity on trading screens. A firm will be able to submit a named order when it wants to advertise its name with the order. The visibility offered by named orders is attractive, because it enables investors to identify who to approach with particularly large trades where risk capital might be needed to provide the desired immediacy.

Named orders behave exactly like a limit order on the order book but member firms will be restricted to having only one buy and one sell named order per security on the order book at any one time. These orders can only be input in a principal dealing capacity. All order types are able to execute against a named order.

### **2.3.3 Order execution**

Order execution will operate as it does on SETS, according to strict price-time priority. This means that market orders, being unpriced, are given priority when entered in an auction call period.

### **2.3.4 Post trade processing**

#### **Trade reporting**

Trades executed automatically on the order book will generate automatic trade reports; hence there is no need for manual reporting of such trades. All automatically executed trades will publish immediately irrespective of size.

For all other trades by member firms in these securities, a trade report will be required within three minutes of the trade being executed. In addition, the existing reporting obligation that requires member firms to transaction report each trade to the Exchange by the end of the day will continue unchanged.

Trade reports submitted to the Exchange (ie off order book trades) will be published immediately unless the trade size qualifies for a delay in publication. This is similar to the regime currently in place for domestic SEAQ securities.

#### **Publication delays**

The following table details the proposed publication delays that apply:

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<sup>4</sup> ‘Named order’ is a business term. The technical name for this order type is the ‘committed principal order’, and is referred to as such hereafter in this document and also in London Stock Exchange technical documentation.

**Table 2: Publication delays / block trades<sup>5</sup>**

<b>Trade size</b>	<b>Publication delay</b>
<= 20 x NMS, or riskless trade (eg agency cross)	Immediate publication
> 20 x NMS (except trades subject to immediate publication)	One business day
Block trade (>= 50 x NMS and marked as a block trade)	Up to five business days <sup>6</sup>

### **Clearing and settlement**

In the first instance, there will not be a central counterparty for the International Order Book. There will be no centralised counterparty risk protection in the form of a trade compensation scheme or a central counterparty.

The identity of a member firm's counterparty will be disseminated to that member firm immediately after a trade has been executed. The Exchange is looking into the feasibility of providing a central counterparty for trades on the new International Order Book service in conjunction with the London Clearing House and CRESTCo.

Settlement will be required to take place in a standard place of settlement eg Clearstream, Depository Trust Company (DTC) or Euroclear. The settlement period will be T+3. The Exchange will issue a document detailing settlement locations in the near future.

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<sup>5</sup> Please note these levels and the current NMS values are currently under consultation

<sup>6</sup> Off netting requirements apply ie pre-release and publish when 90% offset

## 3 International Retail Service

Trading Services Enhancements April 2001 introduces a new execution service aimed at providing retail brokers with the ability to trade electronically in non-domestic securities that are constituents of major European and US benchmark indices.

### 3.1 What will this service offer?

The service introduces a new market model that provides for trading in international securities. In this service, liquidity providers will make available, via existing infrastructure, firm prices in international securities for electronic execution. The range of stocks is likely to be centred on the major European and US blue chips.

The key features of this service are:

- introduction of an electronic execution service for international securities in which market participants are willing to act as price-makers
- these price-makers will register as **committed principals** (CPs) in specific securities and will provide liquidity in sterling prices
- enablement of the 'committed principal' order type so that CPs will display their identity next to their continuous two-way orders. For the purposes of this service the order type will be called a '**committed principal order**'
- brokers will be able to submit orders to electronically execute against CP prices
- brokers will be able to preference execution against a specified CP, provided that CP is making the best price in the market
- a trade reporting regime will be introduced for this service
- all trades will be published to the market
- settlement will take place in CREST Depository Interest (CDI) form.

### 3.2 Why is this service being introduced?

The service has been designed specifically to meet private client broker needs and the demand for retail investors to trade with ease in an electronic, regulated marketplace for non-domestic securities at a low cost.

## 3.3 How will it work?

### 3.3.1 Participants

There are two types of participants in this market: **committed principals** (CPs) who are the price-makers and **broker participants** who are the price-takers.

#### **Committed principals**

Market participants willing to act as price-makers in international securities may register as committed principals (CPs) in securities of their choice<sup>7</sup>. The committed principals have to undertake certain obligations, which include the following:

- maintaining two-way prices in the securities for which they are registered throughout the mandatory CP period
- maintaining prices in a specified, minimum display size
- remaining within a maximum spread where there is only one price maker

Potentially many CPs can register in a single security, competing for order flow and to form the best price in the market. Only CPs can make a visible price that will remain on the order book in the form of committed principal orders. The identity of the CPs registered in that security will be visible against their committed principal orders.

#### **Broker participants**

Any London Stock Exchange member firm registered to do so may electronically execute against the best CP prices in the market. These participants will execute against committed principal orders using aggressive order types. A broker participant will by its nature always be a non-CP for that particular security.

Overleaf is an example of an International Retail Service order book screen.

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<sup>7</sup> Limited to securities listed in London or listed or quoted on an Approved Organisation and subject to qualifying criteria. If your firm is interested in registering as a CP, please contact the Exchange for more information on 020 797 1687 or STX 31687

Figure 2: Example order book screen

SECURITY XYZ				GBX		INTR
NMS	50,000			Close	425	
Last trade	470AT	5,000		Previous	478AT 477 480AT	
High	480	Low	476	Current	+ 0.45	
Vol.	56,000					
BUY		5,000	478	—	480	8,500 SELL
		Volume	Price		Price	Volume
	CSFB	5,000	478.0		480.0	3,500 PEEL
	MLSB	16,000	477.5		480.0	5,000 MLSB
	PEEL	5,000	477.0		480.5	10,000 CSFB

### 3.3.2 The trading day

The trading day will operate from 07:45 until 17:00. A continuous execution phase enabling brokers to trade with CPs, will operate from 08:15 to 16:00. Extended trading hours may apply for US securities. CPs will be able to enter and modify their prices either side of the continuous execution period.

#### Price orientation

The trading day will start at 07:45 with a price orientation phase during which time only CPs are able to enter and modify<sup>8</sup> their prices. During this phase only committed principal order entry and deletion will be permitted and broker participants will not be able to enter orders to execute against committed principal orders. Committed principal orders will execute against other committed principal orders during this phase to avoid choice price or backwardation. Consequently, there is no requirement for an opening auction prior to the start of the continuous execution period.

#### Broker execution (MCPPE)

Following the price orientation phase, brokers will be able to enter aggressive orders for execution against committed principal orders. This broker execution period will last from 08:15 to 16:00. CPs will be obliged to maintain committed principal orders for electronic execution throughout this time. This phase will be called the mandatory committed principal period (MCPPE) and is the continuous trading period during which broker participants may execute against committed principal orders.

<sup>8</sup> Committed principal order modification is achieved by deleting the relevant committed principal order(s) and entering a new committed principal order with revised details.

During the MCPP, aggressive orders will be eligible for input by broker participants and automated execution will continue throughout. As in the price orientation phase, committed principal orders may execute against committed principal orders. The best price will be the best bid and offer price available.

### **Closing prices**

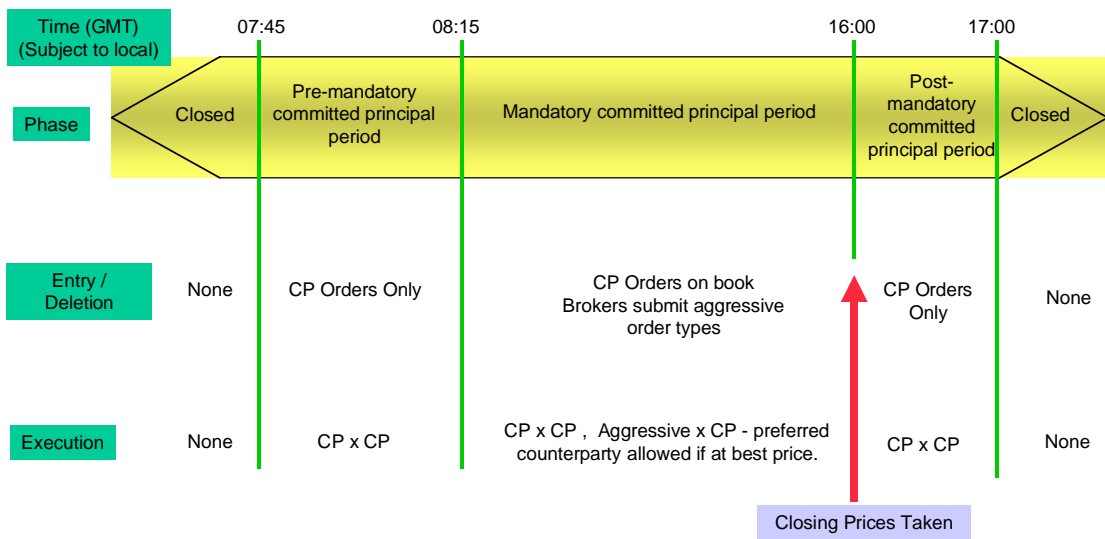
At the end of the mandatory committed principal period (16:00), order execution will cease except for committed principal versus committed principal order execution. The closing price will be determined at 16:00 by the best CP prices available. Committed principal orders will remain visible beyond the close of the market unless deleted by the respective committed principals. All orders will be deleted automatically overnight.

### **Closed market**

During UK bank holidays there will be no trading offered on this service. During home market public holidays the service will be available, but it will be optional for a CP to open committed principal orders on this service. Once opened, the committed principal orders will be viewed as firm for execution purposes. Participants clearly need to exercise caution when executing against these prices with no home market to act as a reference price.

The figure overleaf illustrates the trading day for securities on the International Retail Service.

**Figure 3: Trading day for securities on the International Retail Service**



### 3.3.3 Order entry

The types of orders that may be entered will depend on the type of participant entering the order. Only CPs will be able to enter committed principal orders. These orders will be the only **persistent** orders allowed on the order book. Only **non-persistent** orders are available for input by broker participants and are rejected if not executed.

#### Persistent order types

Committed principal orders may only be entered by CPs registered as such in that security. Committed principal orders must be entered in a principal capacity. Each CP can enter only one buy and one sell committed principal order in a security. These orders are entered independently of each other.

Committed principal orders are the only orders that are able to remain passively within the trading system and which can be seen by the market. These are non-anonymous and will always allow the CP to be identified to broker participants.

#### Non-persistent order types

Broker participants will only be allowed to enter non-persistent orders. These orders will aggressively hit the committed principal orders on the order book. The three order types available to broker participants for electronic execution against CP prices are at best orders; execute and eliminate orders; and fill or kill orders. Aggressive orders cannot execute against each other.

### 3.3.4 Order execution

Order execution will follow strict price-time priority, unless a preferred counterparty has been specified. Automatic execution can occur when an aggressive order hits a committed



principal order. It is possible for execution to occur between committed principal orders, to avoid choice price or backwardation.

### Preferred counterparty

Broker participants may specify a preference for a particular CP at time of order entry. If no **preferred counterparty** is specified or the specified counterparty is not making the best price, then execution will take place according to price and time priority. Price priority cannot be bypassed by specifying a preferred counterparty. Preferred counterparty may not be specified on a committed principal order.

If an aggressive order with a preferred counterparty is entered with a sufficiently high volume to execute against more than one CP order on the book, then the incoming order will execute against the preferred counterparty's order first.

### Refresh of committed principal orders

Execution against committed principal orders will be automatic and will decrement the visible size of that order. When the size of a CP order has been depleted or when the price is changed, the relevant CP will be required to refresh that order to maintain the minimum committed size level. The buy and sell orders may be updated independently.

### Firm prices

Displayed committed principal orders will be considered firm for automatic execution only. Whilst some CPs may optionally agree to deal over the telephone, there is no obligation on CPs to honour these prices.

### Order book scenarios

The following examples illustrate various order book scenarios for the International Retail Service. Please note that the CP names used are for illustrative purposes only.

#### Example 1: CP enters a committed principal order during the price orientation period

##### Before

Buy			Sell		
CSFB	10,000	478.0	479.0	10,000	CSFB

Then MLSB opens price at 478.5 - 480 for volume of 15,000

##### After

Buy			Sell		
MLSB	15,000	478.5	479.0	10,000	CSFB
CSFB	10,000	478.0	480.0	15,000	MLSB

**Example 2: CP enters a committed principal order, which executes during the price orientation period**

**Before**

Buy			Sell		
CSFB	10,000	478.0	479.0	10,000	CSFB

Then MLSB opens price at 479 - 480 for volume of 15,000

**After**

Buy			Sell		
MLSB	5,000	479.0	480.0	15,000	MLSB
CSFB	10,000	478.0			

MLSB and CSFB trade 10,000 at 479 to avoid price backwardation

**Example 3: during broker execution broker enters an aggressive order which hits best buy CP**

**Before**

Buy			Sell		
PEEL	15,000	478.5	479.0	10,000	CSFB
MLSB	10,000	478.5	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

Then broker enters aggressive sell order for volume of 5,000

**After**

Buy			Sell		
PEEL	10,000	478.5	479.0	10,000	CSFB
MLSB	10,000	478.5	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

After executing 5,000 with PEEL at 478.5

**Example 4: during broker execution a broker enters an aggressive sell order with a preferred counterparty**

**Before**

Buy			Sell		
PEEL	15,000	478.5	479.0	10,000	CSFB
MLSB	10,000	478.5	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

Then broker enters aggressive sell order for volume of 5,000 and specifies MLSB as preferred counterparty

**After**

Buy			Sell		
PEEL	15,000	478.5	479.0	10,000	CSFB
MLSB	5,000	478.5	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

After executing 5000 with MLSB at a price of 478.5

**Example 5: during broker execution a broker enters an aggressive order and preferences a CP that is NOT making the best price**

**Before**

Buy			Sell		
PEEL	15,000	478.5	479.0	10,000	CSFB
MLSB	10,000	478.5	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

Then broker enters aggressive sell order for volume of 5,000 and specifies CSFB as preferred counterparty

**After executing 5000 with PEEL at a price of 478.5**

Buy			Sell		
PEEL	10,000	478.5	479.0	10,000	CSFB
MLSB	10,000	478.5	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

CSFB has been specified as preferred counterparty but they are NOT making the best price. Consequently, the preferred counterparty will be ignored and execution will take place according to strict price and time priority

**Example 6: during broker execution a broker enters aggressive order and preferences a counterparty not making the best price but is executed against because of a multiple fill**

**Before**

Buy			Sell		
PEEL	15,000	478.5	479.0	10,000	CSFB
MLSB	10,000	478.0	480.0	15,000	MLSB
CSFB	10,000	478.0	480.0	7,500	PEEL

Then broker enters aggressive sell order for volume of 20,000 and specifies CSFB as preferred counterparty

**After**

Buy			Sell		
MLSB	10,000	478.0	479.0	10,000	CSFB
CSFB	5,000	478.0	480.0	15,000	MLSB
			480.0	7,500	PEEL

Executes 15,000 with PEEL at a price of 478.5 and then executes 5,000 with CSFB at a price of 478. Does not execute against MLSB due to preferencing

### **3.3.5 Post trade processing**

#### **Trade reporting and publication**

Trades executed automatically on the order book will generate automatic trade reports; hence there is no need for manual reporting of such trades. All order book trades will publish immediately, irrespective of size. Information contained in the trade publication to the market will include security, trade price, trade size and type of trade. It will not contain details of the parties to the trade. The trading counterparties will be informed of each others' identities immediately after execution.

Off-order book trades conducted between IRS participants are required to be trade reported and will publish immediately. Trade reports submitted to the Exchange will be published immediately.

#### **Clearing and settlement**

The nature of the trading service, as for the International Order Book, means that a central counterparty will not be used.

The trades need to be matched in CREST with the counterparty in the usual way. Settlement will be in CREST in CREST Depository Interest (CDI) form. The settlement period will be in accordance with home market conventions. The intended settlement date will always be on a home market business day.

## 4 SEAQ crosses

Trading Services Enhancements April 2001 will enhance the existing SEAQ auction functionality previously introduced in May 2000. The enhancements made to SEAQ auctions will aim to make it easier for customers to participate in the auctions and increase the likelihood of execution.

### 4.1 What are we changing?

#### 4.1.1 Current functionality

Currently, SEAQ auctions determine the execution price by using an algorithm, taking into account the prices of the orders entered during the auction. Market participants cannot see the order volumes or prices because the auctions are 'blind' ie no order price or volume data is disseminated to the market during the auction call. Only limit orders can be entered during the auction and all orders are automatically deleted after the auction. In addition, SEAQ auctions only apply to a specific group of up to 80 FTSE 250 stocks.

#### 4.1.2 Trading services enhancements April 2001

SEAQ auctions are being re-launched as SEAQ crosses, reflecting changes to the price determination mechanism from auction to a simple **imported price cross**. This means that orders entered into SEAQ crosses may execute at a price imported from the best market maker quotes displayed on SEAQ, subject to the volume and price limits specified on the orders.

The following changes will be made to the operation of the service:

- The service will be extended to encompass all SEAQ FTSE 250 securities, a more recognisable instrument set
- The auctions will become imported price crosses derived from the best market maker quotes
- In addition to the crosses taking place at 11:00 and 15:00, a third cross will be introduced at 16:45, using the closing price taken at 16:30 as the execution ('crossing') price
- Order entry will be allowed throughout the whole day rather than only in the 15 minutes before each cross
- Market orders will be eligible for entry alongside limit orders

- Trades will be included within the Central Counterparty CCP service to provide post trade anonymity

## 4.2 Why are we making the changes?

The success of SETS in the UK market has led to an increased appreciation of the benefits of order-driven trading. While the most liquid securities are well suited to continuous order-driven trading, capital commitment is often required in less liquid securities to bridge limited order flow.

SEAQ auctions, introduced as part of TSE Release 3.1, maintained the key benefits of market making (ie continuous price formation and immediacy of execution) whilst aiming to focus liquidity, provide greater choice of execution method, and offer participants the chance to benefit from the advantages of order-driven trading.

While the market responded positively to the concept of SEAQ auctions, volumes have been low and it became clear that a few changes were required to SEAQ auctions to reflect the needs of participants.

Market participants found the auction process confusing and consequently were unable to price their orders competitively which in turn reduced the likelihood of execution. Market participants indicated that they were in favour of an execution price that reflected the sentiments of the market makers. This meant that a change had to be made to import the execution price from the best market maker quotes, rather than calculate the price on the basis of the orders entered during the auction. This had to be applied to a recognisable instrument set within SEAQ.

In addition, market participants indicated that they were in favour of gaining exposure to closing prices and therefore a closing price cross needed to be introduced.

## 4.3 How will it work?

Limit and market order entry will be allowed throughout the day in SEAQ<sup>9</sup>, although no order details will be disseminated to the market. This will run alongside the current market making quote system for SEAQ FTSE 250 securities.

Instead of two daily auctions, three SEAQ crosses will operate. SEAQ crosses introduce a simple execution mechanism that uses an execution price derived from market maker quotes, rather than an auction price. The execution price is derived ('imported') from the mid-price of the best bid and offer on display ('**yellow strip**') for the two intra-day crosses, while the closing price taken at 16:30 will be the execution price for the 16:45 cross.

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<sup>9</sup> Limit and market order entry may be rejected if they are entered when uncrossing is running

Market maker quotes will remain firm throughout the mandatory quote period, which will be the same as it is today (08:00 to 16:30), and while market makers are under no obligation to participate in the auctions, it is possible for them to do so.

Limit and market orders can be entered to participate in the crosses. Limit orders may fail to execute if other order prices, or the mid price, exceed or fall short of the limit set. Market orders may also fail to execute if there is insufficient volume entered in the auction.

The figures overleaf show how the mid-price is derived and how it is used for execution in the blind order book.

Figure 4: The mid-price is taken from the best bid and offer quotes in SEAQ

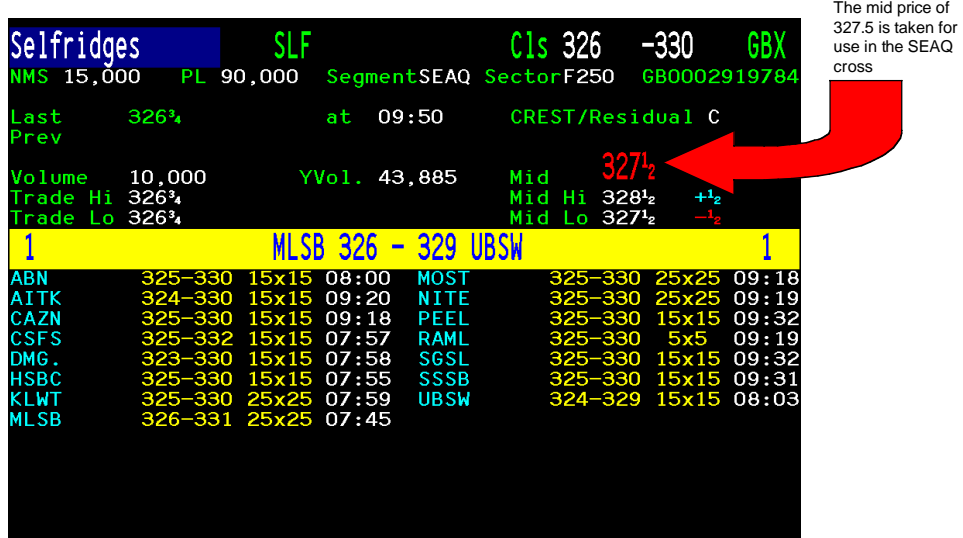


Figure 5: The mid-price of the best market maker quotes is used to execute orders in SEAQ crosses.

**Blind order book before price cross**

Bid		Offer	
30,000	MO	327.00	80,000
20,000	328.50	327.50	10,000
5,000	328.00	329.00	20,000
60,000	327.50	329.50	5,000
10,000	327.00	330.00	5,000
200,000	326.50	330.00	5,000

Mid-price of 327.5 will be used as an execution price for the orders entered into the SEAQ cross

**Blind order book after price cross**

Bid		Offer	
25,000	327.50	329.00	20,000
10,000	327.00	329.50	5,000
200,000	326.50	330.00	5,000
		330.00	5,000

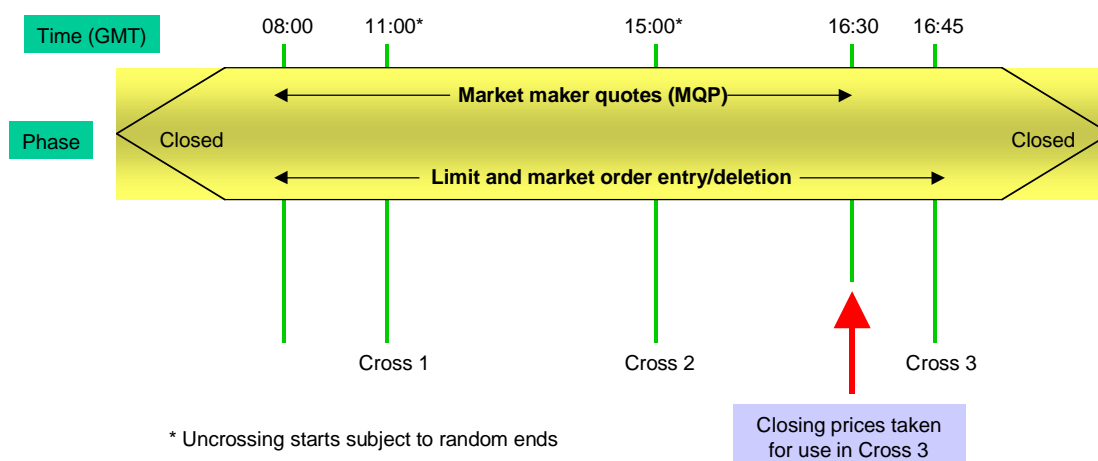
A volume of 90,000 was matched at a price of 327.5



### 4.3.1 The trading day

Continuous order entry and order deletion in SEAQ securities will be possible from 08:00 to 16:45. There will be crosses at 11:00\* and 15:00\* and a closing price cross at 16:45. The 16:45 cross will execute at the closing price taken at 16:30. As the crossing price will be imported from the best market maker quotes, there is no need for price monitoring.

**Figure 6: trading day for SEAQ securities**



### 4.3.2 Order entry

Order entry is extended to allow both limit and market orders. These orders may be entered by participants in either an agent or principal capacity, for all FTSE 250 securities on SEAQ. No order details will be disseminated to market participants.

### 4.3.3 Order execution

Orders will be matched three times a day at 11:00\*, 15:00\* and 16:45.

For the crosses at 11:00\* and 15:00\*, the price at which orders will be executed will be the price imported from the mid-price of the best market maker quotes ('yellow strip'). A random end will be applied to the crosses at 11:00 and 15:00. This will be set to a maximum of 120 seconds. This means that the mid-price may be taken for use in the cross at any time between the start of the cross and up to 2 minutes after the cross.

For the cross taking place at 16:45, the closing price taken at 16:30 will be used for execution. No random end will be applied at the close.

\* \* These crosses are subject to random ends  
 \* These crosses are subject to random ends

Order execution will follow strict price and time priority. Since market orders carry no limit price, they are matched ahead of limit orders. All orders will be executed at the same price and will be eligible for partial fill.

At the end of the random period the mid-price of the best bid and offer prices currently quoted will be determined for each security. To ensure that the calculated mid-price is a valid tick size, the calculated figure will continue to be rounded up to the nearest tick size for that security.

**Table 3: crossing times and trade prices**

Crossing time	Trade price
11:00*	Mid price of best market maker quotes at 11:00
15:00*	Mid price of best market maker quotes at 15:00
16:45	Official closing price at 16:30

#### 4.3.4 After the cross

When orders have matched, counterparties will receive trade confirmation. Unexecuted orders are carried forward to the next cross maintaining their price and time priority, but will be deleted following the **final cross** of the day.

#### 4.3.5 Post trade processing

The trade reporting and publication regime for SEAQ remains unchanged. CCP will be in place for this service and as such, no participant details will be disseminated to the market. Aggregated traded volume and price will continue to be published to the market with an 'ST' trade type.

## **5 Reconfiguration of SETS prices broadcast data group**

This section details a technical change that we are making to accommodate projected future growth of SETS volumes.

### **5.1 Background**

The information broadcast from the Exchange is divided into a number of logical services. The Broadcast Data Groups (BDGs) which form each service are made up of one or more message types; messages are broadcast in real time as they are generated. Each broadcast data group has a maximum bandwidth.

Broadcast Data Group B44 broadcasts the SETS prices service, ie order details (including removals) for SET1, SET2 and SET3. This broadcasts via a 64Kbps line to each customer.

### **5.2 What are we changing?**

It has become necessary to reconfigure the broadcast service to make optimum use of the 64Kbps line capacity. To facilitate this, two additional broadcast data groups, B45 and B46 are being introduced.

For further details on this change, please refer to section 6.9.1 in the Technical section of this document.

## 6 Technical implications

### 6.1 Introduction

The enhanced market structures and functional changes introduced with the new release have been developed to ensure that technical changes are kept to an absolute minimum. This approach builds upon the strategy developed for the Trading Services Enhancements 3.1, which was chosen to minimise impact on the market.

The four initiatives that constitute the new release, International Order Book (IOB), International Retail Service (IRS), SEAQ Crosses and the broadcast data group reconfiguration for SETS Prices (SETS Prices split) have differing technical implications – all of which are described in this chapter.

No changes introduced within the new release will require conformance testing by any participants that have built to the appropriate functionality offered by the Exchange's trading systems today. Some of this functionality has not been utilised previously, such as committed principal order types and preferred counterparty.

Note that the parameters included in this section, including the appendices, are for illustrative purposes only and may be subject to change. The live parameters will be confirmed via a formal service announcement.

#### **For Trading Services Enhancements April 2001**

- No new message types
- No new data field descriptions
- No new advisory codes – although some previously unused advisory codes will be broadcast
- Enablement of previously unused order functionality:
  - Committed Principal
  - Preferred Counterparty
- New broadcast data groups\*
- New data field values:
  - Market Segments

- Market Sectors
- Period Names

*\*SETS Prices and IRS will make use of two new BDG's to increase throughput efficiency. This will use the same set of message types and share the bandwidth used by B44.*

## 6.2 Trading system configuration

The new release expands on the present market infrastructure by adding a number of new market segments, sectors, and two new broadcast data groups. These additions are necessary to accommodate the new services included as part of the new release.

There will be no changes to the message structure of reference data. All existing segment, sector and trading instrument rules will continue to be disseminated over the existing broadcast data groups.

The table below summarises the changes to market structure by service.

**Table 3: changes to market structure per service**

Service	New segment	New sector(s)	New instruments	New periods	Prices BDG(s)
IOB	✓	✓	×	✓	B22
IRS	✓	✓	✓	✓	B46*
SEAQ crosses	×	×	×	✓**	B01
SETS prices split	×	✓	×	×	B44/B45

\*SETS/IRS will use new broadcast data groups created as part of SETS Prices Split

\*\*Changes to existing SEAQ period rules required

### 6.2.1 New broadcast data groups

To accommodate the expected message output following the new release the message output from B44 is being split and two additional broadcast data groups, B45 and B46 will be introduced. This will require two new sectors within the SET1 and SET2 segments in addition to those new sectors introduced for the IRS service. These are detailed below. Section 6.9.1 describes the technical implications of splitting the B44 broadcast data group.

### 6.2.2 New market segments and sectors

The IOB service will operate within a new segment and sector which will run alongside the current SEAQ International service within the international market.

The IRS service requires the addition of market segments and sectors within the domestic market.

SEAQ Crosses does not require new segments, however those instruments currently in the 25AC and SQAC sectors will be moved to the F250 and SQOS sectors respectively. Once the new release has been implemented no instruments will be assigned to either 25AC or SQAC and these sectors will be deleted.

Table 4 summarises the market segments and sectors per service.

In parallel with, but not part of, the new release a new sector STSS will be added to the SET3 segment from 12 March for instruments with a price below 25 pence.<sup>10</sup>

**Table 4: Market segments and sectors per service**

Service	Segment	Sector(s)	Description
<b>IOB</b>	IOB	LLIS	London Listed International Securities
		LIS1	London Listed International Securities 1
		NLLS	Non-London Listed International Securities
		NLS1	Non-London Listed International Securities 1
<b>IRS</b>	INTR	BECP	Belgium Committed Principal Sector
		CHCP	Swiss Committed Principal Sector
		DECP	German Committed Principal Sector
		ESCP	Spanish Committed Principal Sector
		FRCP	French Committed Principal Sector
		ITCP	Italian Committed Principal Sector
		NLCP	Netherlands Committed Principal Sector
		OTCP	Other Committed Principal Sector
		USCP	US Committed Principal Sector
		<b>SEAQ</b>	SEAQ
SQOS	Other SEAQ Securities		
SEQ1	FS25		FTSE 250 Quotes
	SEQ1		Other SEAQ Securities
<b>SETS</b>	SET1	FT10	FTSE 100

<sup>10</sup> Tradable Instruments to be confirmed by a separate Service Announcement before 12 March

Service	Segment	Sector(s)	Description
		FS10*	FTSE 100
	SET2	FT25	FTSE 250 Orders
		FE25*	FTSE 250 Orders
	SET3	EM	extraMARK
		SECN	Security Notifications
		STOS	Other SETS Securities
		STSS#	Securities below 25p

\* New sectors within the SET1 and SET2 segment

# New sector introduced in parallel with this release



### 6.2.3 New periods

The IOB and IRS are additional services that require new trading segments and default period schedules. New functionality will be implemented using period specific rules for these segments.

To accommodate the new auction execution periods and continuous order entry introduced by SEAQ Crosses, a new period schedule will be introduced for the F250 and FS25 sectors within the SEAQ and SEQ1 segments. New periods will be introduced whilst some existing periods will change or be deleted. Instruments in the SQOS and SEQ1 sectors will not be subject to uncrossing and the existing default schedule and period rules for these sectors will remain unchanged.

SETS Prices Split introduces new sectors. There will no impact to existing segment level period rules.

The following tables summarise the new default schedules for the IOB, IRS and SEAQ.

Indicative trading rules per period can be found in the appendices.

**Table 5: Default period schedule for the IOB**

Period start time	Period name	Period description
07:00	OPEN	Market open
09:00	POBT	Opening auction call
09:30	IOBT	Auction execution followed by order book trading
14:52	OBT1	Order book trading no price monitoring
15:00	VWPT	Order book trading VWAP calculation
15:30	CCAL	Closing auction call
15:40	CAUC	Auction execution followed by off order book trading
17:00	OBC	Order book close
17:15	CLOS	Market close
17:16	ADMIN	Administration
17:30	EOA	End of administration

**Table 6: Example default period schedule for IRS\***

<b>Period start time</b>	<b>Period name</b>	<b>Period description</b>
07:00	OPEN	Market open
08:00	PMCP	Pre mandatory committed principal period
08:15	MCPP	Mandatory committed principal period
16:30	EMCP	End of mandatory committed principal period
17:00	OBC	Order book close
17:15	CLOS	Market close
17:16	ADMIN	Administration
17:30	EOA	End of administration

\*actual timings will vary between sectors according to home market trading hours

**Table 7: Default period schedule for SEAQ (FT250 sector – SEAQ Crosses)**

<b>Period start time</b>	<b>Period name</b>	<b>Period description</b>
07:00	OPEN	Market open
07:30	PSMQ	Pre-mandatory quote period
08:00	SQMQ	Mandatory quote period and MO LO entry
11:00	SCRS	SEAQ cross
11:03	SMQ1	Mandatory quote period and MO LO entry
15:00	SCRS	SEAQ cross
15:03	SMQ2	Mandatory quote period and MO LO entry
16:30	ESMQ	End of mandatory quote period
16:45	SQCC	SEAQ closing cross
17:15	CLOS	Market close
17:16	ADMIN	Administration

<b>Period start time</b>	<b>Period name</b>	<b>Period description</b>
17:30	EOA	End of administration

## 6.2.4 Temporary instrument schedules

Trading in an instrument may be interrupted and a temporary schedule invoked if:

- The listing of that instrument is suspended
- A trading halt is imposed by the Exchange
- The price monitoring limit is breached (automatic execution on order book only)
- The instrument is subject to a price or market order extension

Period codes for temporary schedules for instruments in the IOB and IRS are summarised in Table 8. These temporary periods will be in addition to those used by the Exchange under exceptional circumstances.

**Table 8: Temporary instrument schedules**

Temporary period	SEAQ	IOB	IRS
Suspension	SUSP	SUSP	SUSP
Trading halt	HALT	HALT	HALT
Price monitoring suspension	N/A	AESP	N/A
Market order closing extension (No price monitoring extension)	N/A	MOC1	N/A
Market order closing extension	N/A	MOCX	N/A
Market order extension 1 (No price monitoring extension)	N/A	MOE1	N/A
Market order extension	N/A	MOEX	N/A
Price monitoring closing extension 1 (No market order extension)	N/A	PMC1	N/A
Price monitoring closing extension 2 (No market order extension)	N/A	PMC2	N/A
Price monitoring closing extension	N/A	PMCX	N/A
Price monitoring extension 1 (No market order extension)	N/A	PME1	N/A
Price monitoring extension	N/A	PMEX	N/A

## 6.3 Use of auctions

The IRS service will not be subject to auctions.

There will be some internal configuration changes to auction functionality on SEAQ to implement the new features of SEAQ Crosses. The IOB will incorporate opening and closing auction execution periods similar to those currently implemented on SETS. Auctions will be subject to the same price monitoring extensions as those on the SETS service.

The SETS Prices Split does not affect auctions – instruments in the same sector will continue to have the same random auction uncrossing time. It is possible that some instruments that currently share the same sector will now be in different sectors with alternative random uncrossing times.

The Exchange will continue to disseminate period changes using 5OW Sector Period Change and 5OV Tradable Instrument / Currency Period Change messages. The format of these messages will be unchanged from current functionality.

### 6.3.1 IOB

Auctions will function similarly to those currently on SETS but with the following differences:

- Named orders (CP order type – see Section 6.4), Limit Orders (LO) and Market Orders (MO) may be entered during an auction call period.
- The continuous trading dynamic price tolerance will be configured as either 10% or 20% dependent on sector
- The opening auction price monitoring tolerance will be configured as 20% for all sectors
- The closing auction price monitoring tolerance will be configured as 5% for all sectors
- The opening auction call period will start at 09:00 with auction execution after 09:30
- The closing auction call period will start at 15:30 with auction execution after 15:40

Intra-day auctions may also be invoked throughout the trading day whenever price monitoring is breached. Each auction will have an auction call period followed by an auction execution period.

IOB auctions are also subject to a random end to the auction call period, which is implemented as a random **start** to the next period. This will be configured to a maximum of 30 seconds.

Auction call extensions are implemented as those currently for SETS. Period names and codes for auctions and auction call extensions are summarised in Table 9.

**Table 9: IOB auction period names and codes**

Period Name	Period Code
Market order closing extension (No price monitoring)	MOC1
Market order closing extension	MOCX
Market order extension 1 (No price monitoring)	MOE1
Market order extension	MOEX
Price monitoring closing extension 1 (No market orders)	PMC1
Price monitoring closing extension 2 (No market orders)	PMC2
Price monitoring closing extension	PMCX
Price monitoring extension 1(No market orders)	PME1
Price monitoring extension	PMEX

As for SETS, individual trade reports for each trade executed in the uncrossing are not disseminated. A single trade report per Tradable Instrument / Currency is disseminated for the trade volume executed during uncrossing with a Trade Type of “UT” at the end of the auction execution period.

### 6.3.2 SEAQ crosses

SEAQ Crosses introduces a number of enhancements to the existing SEAQ auction functionality. With the exception of default period rules, there are few technical differences from TSE Release 3.1. Table 10 highlights the functional differences between SEAQ Auctions and SEAQ Crosses.

**Table 10: Functional differences**

	SEAQ Auctions	SEAQ Crosses
Crossing periods	11:00 and 15:00	11:00, 15:00 and 16:45
Market order entry	No	08:00 to 16:45
Limit order entry	15 minutes prior to uncrossing	08:00 to 16:45
Indicative price disseminated	No	Can be inferred from the Mid Price field in <b>5SE</b> 'Best Price' message
Random end period	No	120 seconds
Price monitoring extension	No	No

	<b>SEAQ Auctions</b>	<b>SEAQ Crosses</b>
Price discovery mechanism	Matching algorithm	Imported midprice
Trade reporting	Single trade report	Single trade report
CCP eligible segment	From 26 February	Yes

Auction functionality is extended across all FTSE 250 securities. In addition, a new execution period has been introduced at close of trading. This means that the order book will now be uncrossed three times daily, at 11:00, 15:00 and 16:45.

A random configurable end will be applied to the crosses at 11:00 and 15:00. This will be set to a maximum of 120 seconds. For the cross taking place at 16:45, the closing price taken at 16:30 will be used for execution.

Both Limit Orders (LO) and Market Orders (MO) can be entered from the start of the mandatory quote period to the closing crossing call. A minimum size will be set for orders by tradable instrument. This will be broadcast as reference data using a **5OB** 'Tradable Instrument / Currency in Market Segment' message with the Minimum Principal and Minimum Agent Order Size set.

A **5TF** message, 'Send Trade Information to Counterparties' will be sent to each participant for each trade executed. Following uncrossing, trade reports will be disseminated to the market over the London Market Information Link (LMIL). A single **5UP** 'Uncrossing Price' message and a **5OZ** 'Trade Report' message will be sent for each tradable instrument / currency. The Trade Type indicator will be set to "ST" and the Trade Size field will contain the entire volume of executed trades.

Unmatched orders will remain on the book following uncrossing and carried over to the next cross. Details of any orders remaining on the book can be downloaded using the Own Order Book Download service by sending a **5RO** 'Request Order Download' message over the interactive interfaces. The download response may also contain orders on the SETS, SEATS PLUS, IOB and IRS order books if a participant subscribes to these services. SEAQ orders can be identified using the Market Segment and Market Sector Code fields in the order details component of the message. Any orders left on the book after the final uncrossing at 16:45 will be deleted.

## 6.4 Market mechanism types

The new trading services introduced generally adopt those market mechanisms currently supported by the SETS and SEAQ trading services. However, both the IOB and IRS allow for Named (CP) orders and IRS will allow for preferred counterparties.

Table 11 summarises the main attributes of the market mechanism types for each trading service.

**Table 11: Market mechanisms/attributes**

Market Mechanism	IOB	IRS	SEAO Crosses
Aggressive Type A order (AA)	✓	✓	✗
Aggressive Type B order (AB)	✓	✓	✗
Limit Order (LO)	✓	✗	✓
Market Order (MO)	✓	✗	✓
Named Order (CP)	✓	✓	✗
Firm / Indicative quotes (FQ / IQ)	✗	✗	✓
Preferred Counterparty	✗	✓	✗
Single Fill Indicator	✗	✗	✗

### 6.4.1 Named orders

Both the IOB and IRS will allow authorised market participants to display their identity alongside limit type orders on the order book. The existing committed principal (CP) market mechanism will be used to support this functionality. Aggressive orders (AB and AA), Limit Orders (LO) and Market Orders (MO) can execute against CP orders. CP orders will also execute against other CP orders if they are able to.

Only one CP buy and one CP sell order is allowed per tradable instrument per registered participant. If a participant attempts to submit a buy or sell CP order where the order book already contains a CP order with that participant's code, then a **5E3** 'Acknowledge Order Details' message is sent with the advisory code set to either **Q304I** "Buy Committed Principal Order already on Quote / Order Book" or **Q305I** "Sell Committed Principal Order already on Quote / Order Book".

Limit Orders cannot be entered onto the IRS order book.

### 6.4.2 Entering named orders

Both buy and sell orders will be entered onto the book using **5EO** 'Enter Order messages with the Market Mechanism Type set to "CP"'. Buy and sell orders must be entered and updated independently.

Orders on the book can be deleted using current message types and can expire if an expiry time and / or date is specified.

Order details will be disseminated to the market over LMIL. For each order a **5OO** 'Order Details' message, will be sent with the Market Mechanism Type of "CP" and the Participant Code set to the BIC of the market participant who entered the order.



For those customers who wish to identify the Participant Mnemonic, for example to display the mnemonic alongside orders, the Participant Mnemonic must be referenced using the Participant Code. The link between Participant Mnemonic and Participant Code is disseminated to the market via **5OP** 'Participant' messages sent over reference data download broadcast data groups.

### **6.4.3 Named order obligations**

Named orders within IRS require certain obligations through the use of the CP order. Only those IRS market participants registered in that security can enter CP orders. All CP orders will be validated as coming from a registered market participant.

If order execution on either the buy or sell side results in a CP order volume less than the minimum size the market participant is obliged to replace the order so that the volume is the minimum size or greater. Orders must be updated within a time period defined by the Exchange that will be communicated to the market in advance of the new release.

If a participant attempts to execute against a CP order on the book which is subsequently filled just prior to execution, and assuming that there are no other CP orders on the book, then the incoming order will not be executed. A **5E3** 'Acknowledge Order Details' message will be sent with the advisory code set to **Q228I** "No matching has occurred". The order must then be resubmitted.

#### 6.4.4 Preferred counterparties

Period rules permit IRS participants to optionally specify a preferred counterparty when entering Aggressive Type A or Aggressive Type B orders. To specify a preferred counterparty a **5EO** 'Enter Order' message must be sent with the Preferred Counterparty field set to the Participant Code (BIC) of the committed principal showing the order.

For those customers who wish to identify the Participant Mnemonic, for example to display the mnemonic alongside orders, the Participant Mnemonic must be referenced using the Participant Code. The link between Participant Mnemonic and Participant Code is disseminated to the market via **5OP** 'Participant' messages sent over reference data download broadcast data groups.

If an invalid Participant Code is specified, a **5E3** 'Acknowledge Order Details' message is sent with the advisory code set to **Q297I** "Invalid Preferred Counterparty".

If a preferred counterparty is specified that is not making the best price then execution will take place according to price and time priority.

If an Aggressive Type A or B order with a preferred counterparty is entered with a sufficiently high volume to execute against more than one CP order on the book then the incoming order will execute against the preferred counterparties CP order first (assuming the preferred counterparty is making the best price).

### 6.5 Contra trading

The introduction of SEAQ Crosses has no implication for the contra trading rules introduced by implementation of the Central Counterparty. The Central Counterparty will not initially be used for automatic order executions on the IOB and the IRS trading services. Contra trading rules for the IOB and IRS are described below:

#### 6.5.1 Contra date is trade date

For both the IOB and IRS service, both counterparties will know each other's identity and all negotiation of the contra will take place without involvement of the Exchange. If a contra is agreed then both parties should send a **5CN** 'Cancel Trade Report' message with the trade code of the original trade.

#### 6.5.2 Contra date is not trade date

For both the IOB and IRS service, both counterparties will know each other's identity and all negotiation of the contra will take place without involvement of the Exchange. If a contra is agreed **one** party should send a **5ET** 'Enter Trade Report' message with a trade type of 'PC'

correcting the trade. The usual trade reporting obligations will determine the party reporting the trade.

## 6.6 Trading parameters

The detailed parameters for the IOB and IRS are provided in the appendices. There are no changes to any SEAQ parameters. Reference data will continue to be broadcast over existing broadcast data groups to support the new services. This is described in Section 6.9 – Broadcast data groups.

## 6.7 Advisory codes

The new release does not introduce any software changes and no new advisory codes will be created. However the introduction of the new services will mean that customers may receive advisory codes that have not previously been used. Existing advisory codes will also be received in new contexts.

Table 12 describes those advisory codes that may be received following implementation of the new release.

**Table 12: Advisory codes**

<b>Advisory Code</b>	<b>Name</b>	<b>Description / Context</b>
Q093I	Participant not registered	A participant who is not registered attempts to send a CP order
Q297I	Invalid Preferred Counterparty	The specified counterparty is not a valid participant
Q306I	Dealing Capacity must be principal	A CP order is sent where the participant dealing capacity set to other than "P" – principal
Q228I	No matching has occurred	A participant attempts to execute against a CP order that is no longer on the book
Q304I	Buy Committed Principal order already on quote / order book	A participant attempts to add a second CP buy order to the order book
Q305I	Sell Committed Principal order already on quote / order book	A participant attempts to add a second CP sell order to the order book

## 6.8 Recommended display guidelines

The introduction of SEAQ Crosses and SETS Prices Split will have no impact on the recommended display guidelines for SEAQ or SETS.

It is expected that most customers will utilise existing SETS functionality when implementing the IOB and IRS and the recommended display guidelines for SETS should be followed when designing user interfaces to these systems. Both the IOB and IRS require the display of participant mnemonics alongside Committed Principal orders – the following guidelines should be followed in addition to the existing SETS display principals:

### IOB

At each price level orders should be displayed as follows:

- Committed principal orders should always be shown separately with the committed principal's participant mnemonic
- Where limit orders exist with committed principal orders the orders should be ranked in price and time priority.
- Where aggregated limit orders contains orders with time priorities both earlier and later than a CP Order, the aggregated limit order should be separated into individually aggregated limit orders and presented in time priority:
  - an aggregated order containing orders of an earlier time than the CP
  - one or more unaggregated CP orders
  - an aggregated order containing orders of a later time than the CP
- Whilst orders can be aggregated, as described above, the top 10 price levels on each side of the book should be displayed.

### IRS

At each price level orders should be displayed as follows:

- Each committed principal order should be displayed with its committed principal participant mnemonic based on price and time priority
- The top ten orders, based on price and time priority, should be displayed
- Only Committed Principal orders can reside on the book

## 6.9 Broadcast data groups

Supporting information, including reference data for the new services will be broadcast to the market over the London Market Information Link (LMIL). The IOB will use existing broadcast data groups whilst IRS will utilise the new broadcast data group B46 created alongside the SETS Prices split. No new message types will be created to support the introduction of the new trading services.

With the introduction of the IOB some current SEAQ international securities will now be traded on a public order book although the majority will remain within the existing market structure (SEAQ International). There will be no new broadcast data groups to support the IOB so a mixture of orders and quote details will be sent to the market over the International Prices group (B22). The introduction of SEAQ Crosses has no effect on SEAQ broadcasts and these remain unchanged. Table 13 summarises message types broadcast for IOB and IRS by broadcast data group.

**Table 13: Messages by broadcast data group**

Message type	IOB	IRS
Order / Quote details	International Prices* – B22	IRS Prices – B46
Market status messages	Market Status Indicators – B02 International Prices* – B22	Market Status Indicators – B02 IRS Prices – B46
Trade reports	International Trades – B21	UK Orderbook Trades – B43
Best prices, including uncrossing and closing prices	International Bests – B26	UK Orderbook Bests – B23
Order book download	UK Orderbook download – B40	UK Orderbook download – B40
Snapshots	International Snapshots – B28	UK Snapshots – B27
Closing prices	International Closing Prices – B30	UK Closing Prices – B29
Market reference data	International Market Reference Data Full – B14 International Market Reference Data Changes – B15	UK Orderbook Market Reference Data Full – B41 UK Orderbook Market Reference Data Changes – B42
System rule reference data	International System Rule Reference Data Full – B36	UK System Rule Reference Data Full – B06

Message type	IOB	IRS
	International System Rule Reference Data Changes – B37	UK System Rule Reference Data Changes – B07

\*Formally known as International Quotes

### 6.9.1 SETS prices split

The SETS Prices broadcast service currently disseminates UK order book prices over the B44 (SETS Prices) broadcast data group.

In order to maximise throughput and to accommodate the expected message output the following broadcast data groups are being introduced:

- B45 - SETS Prices
- B46 - IRS Prices

Selected tradable instruments currently in SET1, all SET2 instruments and all instruments currently in SET3 will be dedicated to the new group B45. All IRS order book prices will be disseminated over B46.

To accommodate the new broadcast data group a new sector will be created on the SET1 segment and an additional sector created for selected FT25 instruments on SET2. New sectors are detailed in Table 14. Individual instrument sector changes will be detailed in a separate Service Announcement before 30 April.

The two new sectors will be in addition to the new sector STSS added to SET3 on 12 March for instruments with a price less than 25 pence.

Broadcast data group mapping data (including Network User Address) is provided in the appendices.

**Table 14: Sector to BDG mapping**

<b>Tradable Instruments</b>	<b>Current Sector</b>	<b>April 2001 Sector</b>	<b>Current BDG</b>	<b>April 2001 BDG</b>
FTSE 100	FT10	FT10	B44	B44
Selected FTSE 100	-	FS10	-	B45
FTSE 250	FT25	FT25	B44	B45
Selected FTSE 250	-	FE25	-	B45
extraMARK	EM	EM	B44	B45
Security Notifications	SECN	SECN	B44	B45
Other SETS	STOS	STOS	B44	B45
IRS Securities	-	BECP CHCP DECP FRCP ESCP ITCP NLCP OTCP USCP	-	B46

In order to receive a complete set of SETS order book prices customers must now make a separate X.25 call to the B44 and the B45 Network User Address and establish a Switched Virtual Circuit for each broadcast data group.

To receive IRS order book prices a separate X.25 call must be made to the B46 Network User Address and a Switched Virtual Circuit established for this group.



Data will be broadcast over each of these circuits with BDG bandwidth requirements determined by the number of instruments allocated to each group. The combined bandwidth of all groups will not exceed 64kbps.

Each BDG will have its own unique Message Sequence Number. Customers systems can check for missing messages by checking the sequence numbers of arriving messages. It should be noted that any checks for missing messages must be made for each broadcast data group. Any re-requests should continue to be made via the interactive interface specifying the broadcast data group (B44, B45 or B46) of the messages to be re-requested.

For SETS Prices customers' systems may require that the messages broadcast over the B44 and B45 groups be recombined. The following applies to recombined messages:

- The Message Sequence Number will be unique only for each BDG. Combining messages from B44 and B45 will result in messages sharing the same sequence number
- Trade codes will continue to be unique for all trades on SETS. This means that trade codes will not be duplicated across broadcast data groups.

## 7 Implementation

### 7.1 Trading services enhancements April 2001

#### 7.1.1 When will these changes be implemented?

The Trading Services Enhancements April 2001 will go live on 30 April 2001.

- 29 January 2001                      Launch of customer testing services
- February 2001                        Publication of rules consultation notice
- February 2001                        Customer seminars
- 30 April 2001                         Launch of new services and enhancements

#### 7.1.2 Supporting documentation

This guide provides all the technical information required to enable customers to understand the enhancements and make the required system changes.

##### **What additional support is available?**

The Exchange will provide a number of support measures to assist customers with their development, testing and market readiness activities.

Where required the LSE will offer assistance in the form of:

- seminars to provide an overview of the changes
- visits by our support team to customer sites on request

### 7.2 Conformance and customer testing

The Exchange will provide the necessary testing framework to enable customers to test all new functionality introduced in Trading Services Enhancements April 2001 and to demonstrate conformity where this is required. A number of enhancements have been made to the Conformance Test Service and the Customer Development Service (CDS) to reflect all of the new and changed services in the new release. The CDS will reflect all valid market mechanisms that will be used on the live service for this release. This section explains the scope of these test services in detail.

## **7.2.1 Conformance**

Preferred counterparty functionality has been tested as part of conformance. This means that there will be no change to the testing for those customers who wish to conform to this particular functionality. Customers that are currently able to demonstrate conformance ie pre-Trading Services Enhancements April 2001, will not be required to reconform.

**Table 15: impact of trading services enhancements April 2001 on conformance for new and existing customers**

Service	Change to conformance	Details	Conformance required
SEAQ Crosses	✗	No change to existing SEAQ LMIL / Trading test cycles	Not required
IOB	✓	<p>New mandatory trading test cycle for Committed Principal Orders</p> <p>Conformance to UK Order Book download broadcast data group (B40) required</p>	<p>New / existing non-SETS trading customers only</p> <p>New / existing customers who do not take B40</p>
IRS	✓	<p>New mandatory trading test cycle for Committed Principal Orders</p> <p>Mandatory trading test cycle for preferred counterparties</p> <p>New customers will be required to conform to new Broadcast Data Group B46 within the same cycles as that for B44</p>	New / existing non-SETS trading customers only
SETS prices split	✓	New customers will be required to conform to new Broadcast Data Group B45 within the same cycles as that for B44	New customers only

## 7.2.2 Customer development service for International order book

The existing volume input segment SET7 will be reconfigured and a new sector IOB created with period specific rules to support IOB functionality. The test segment will be configured for non-CCP contra trading.

The IOB test sector will contain two test instruments listed in the appendices. Customers can use these instruments to test all basic order functionality supported by the IOB.

There will be no background-scripted scenarios. Customers can participate in the scheduled opening and closing auctions but auction activity will be dependent on CDS trading activity. Customers who wish to observe auctions may also wish to use the existing SETS scripted scenario service (SET4).

Market and reference data will be broadcast over the international broadcast data groups and the UK Order book download (B40) group. Customers will be able to download their own order book details over the interactive interfaces.

## 7.2.3 Customer development service for IRS

The new broadcast data group B46 will be added to the CDS service on 29 January for IRS testing. A new test segment IRES<sup>11</sup> will be created as part of the Scripted Scenario Simulation service using a new sector FR1 with period-specific rules to support IRS functionality. All existing SETS customers will be enabled for named (CP) orders. The test segment will be configured for non-CCP contra trading.

The IRES test sector will contain five dummy instruments listed in the appendices. Customers can use these instruments to test all basic order functionality supported by IRS.

To guarantee order book activity the following background scripted scenario will be executed by an Exchange dummy participant for three of the five dummy instruments.

- Every hour one large<sup>12</sup> buy CP order and one large<sup>12</sup> sell CP order is entered onto the book. This order will have a dummy participant code and will be of a sufficient size so that normal trading activity will not reduce the size of the order below the minimum size.
- Small<sup>13</sup> Aggressive Type B orders will be entered every five minutes to fully execute against the best priced CP order on the book
- At 59 minutes past the hour any of the remaining buy CP order and any of the remaining sell CP order is deleted before order re-entry on the hour

No background activity will be scripted for the remaining two instruments to allow for customers individual test activity.

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<sup>11</sup> The live segment will be named INTR

<sup>12</sup> Trade volume size equal to 50,000

<sup>13</sup> Trade volume size equal to 1,000

## **7.2.4 Customer development service for SEAQ Crosses**

Customers will be able to test SEAQ Crosses using the existing SEAQ scripted scenario service. New default period rules will enable the entry of Limit and Market order entry throughout the day for all tradable instruments.

Intra day auctions will no longer be run eight times daily. To replicate a typical trading day there will now be three execution periods corresponding to the actual timing of crosses on the live service. Limit and Market Order entry will be allowed throughout the day with uncrossing at 11:00 plus a random period<sup>14</sup>, 15:00 plus a random period<sup>14</sup> and at 16:45. There will be no Exchange scripted activity to simulate order entry for auctions. There will be no changes to the general SEAQ background scripts.

## **7.2.5 Customer development service – SETS prices split**

The new broadcast data group B45 will be added to the CDS service on 29 January. Idle poll messages only will be sent down this group at this time. The two new sectors FS10 and FE25 will be added to the SET1 and SET2 segments following CCP go live and will be broadcast down B45. Relevant tradable instruments will be migrated to the new sectors and order details reflecting CDS segment activity broadcast from this date.

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<sup>14</sup> Configurable by the Exchange – maximum of 120 seconds

## Appendix 1: International Order Book securities

Please note that this list of securities<sup>15</sup> should be used as an indication only and is subject to change

Country	Issuer Name	NMS	TIDM
Croatia	Pliva D.D.	10,000	PLVD
Czech Republic	Cesky Telecom A.S.	5,000	CKTD
Czech Republic	Komerčni Banka	10,000	KMCA
Egypt	Commercial Intl Bank(Egypt)S.A.E	5,000	CBKD
Greece	Hellenic Telecom.Organizati on S.A.	10,000	OTES
Greece	Panafon Hellenic Telecommunications	10,000	PFHD
Hungary	Magyar Olaj-Es Gazipare Reszvenytar	10,000	MOLD
Hungary	Mata v Rt	10,000	MAVD
Hungary	OTP Bank	5,000	OTPD
Hungary	Richter Gedeon Vegyeszeti Gy ar Rt	5,000	GDND
India	Mahanagar Telephone Nigam	10,000	MAGD
India	Reliance Industries	10,000	RIGD
India	State Bank Of India	10,000	SBID
India	Videsh Sanchar Nigam	10,000	VSNA
Poland	KGHM Polska Miedz	10,000	KPMD
Poland	Polski Koncern Naftowy Orien SA	25,000	POKD
Poland	Telekomunikacja Polska	25,000	TPSD
Russia	AO Tatneft	10,000	ATAD
Russia	Gazprom	10,000	OGZD
South Korea	Korea Electric Power Corp	10,000	KPWD
South Korea	Korea Telecom	10,000	KTCD
South Korea	Pohang Iron & Steel Co	10,000	PIDD
South Korea	Samsung Electronics Co	2,500	SMSN
South Korea	Samsung Electronics CO	5,000	SMSD
South Korea	SK Telecom	10,000	SKMD
Taiwan	Acer Peripherals Inc	10,000	ACID
Taiwan	Asustek Computer Inc	10,000	ASKD
Taiwan	China Steel	25,000	CNSD
Taiwan	Siliconware Precision Industries Co	10,000	SILA
Taiwan	Taiwan Semiconductor Manufacturing	10,000	TMSD
Taiwan	Winbond Electronic Corp	10,000	WBDD
Turkey	Akbank Turk Anonim Sirketi	10,000	AKBD
Turkey	Haci Omer Sabanci Hldgs A.S.	10,000	HOSD
Turkey	Turkiye Garanti Bankasi	10,000	TGBD
Turkey	Turkiye IS Bankasi	25,000	TIBD
Turkey	Turkiye Petrol Rafinerileri A.S.	5,000	TPRD
Turkey	Yapi Ve Kredi Bankasi A.S.	10,000	YKBD

<sup>15</sup> Eligible securities have to be listed in London or listed or quoted on an Approved Organisation or on an exchange which is included on the Federation Internationale des Bourses de Valeurs list

## Appendix 2: Trading parameters

Please note that this list of parameters may be subject to change

Parameter*	IOB	IRS
Dynamic price tolerance applied during continuous trading for stocks \$5 and above	10%	No dynamic price monitoring enabled
Dynamic price monitoring tolerance applied during continuous trading for stocks below \$5	25%	N/A
Opening auction price monitoring tolerance	20%	N/A
Closing auction price monitoring tolerance	5%	N/A
Automatic execution suspension period	5 minutes	No dynamic price monitoring enabled
Trade reporting deadline	3 minutes	3 minutes
Closing price determination	If the security does not uncross in the closing auction, the closing price will be the VWAP of all automatically executed trades ("ATs") for a specified period.  In the event that there is no VWAP price the last AT price prior to the VWAP will be used.	Closing price determined by the mid-price of the best CP prices
Price monitoring extensions	1 <sup>st</sup> extension lasts 2 minutes (+ up to 30 seconds random period). 2 <sup>nd</sup> extension lasts 10 minutes (+ up to 30 seconds random period).	N/A
Market order extension	Duration of this extension is 2 minutes (+ up to 30 seconds random period).	N/A
Currency code	United States Dollar	Pound Sterling
Tradable instrument type	DR (Depository Receipt)	IE (International Equity)
Lot size	50 shares	N/A
Quote unit size	N/A	N/A
Minimum order / quote size	50 shares	No minimum size



<b>Parameter*</b>	<b>IOB</b>	<b>IRS</b>
Maximum order / quote size	99999.99 x NMS	99999.99 x NMS
Tick size	<ul style="list-style-type: none"> <li>• 0.25 of a cent for shares priced –up to \$5</li> <li>• 0.5 of a cent for shares priced \$5 - \$10</li> <li>• 1 cent for shares priced more than \$10</li> </ul>	Instrument specific

\*to be confirmed by notice in April 2001

## Appendix 3: International Order Book – period rules

Please note that these period rules may be subject to change

Period Name	LO Entry / Deletion	MO Entry / Deletion	CP Entry / Deletion	Auction Call	Price Monitoring Enabled	Price Monitoring Period	MO Extension Enabled	MO Extension Period	Uncross at Start	Random Start	Calculate VWAP Price	Closing Volume Check
ADMN	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
AESP	Y	Y	Y	N	N	-	Y	MOE1	N	N	N	N
CAUC	Del Only	Del Only	Y	N	N	-	N	-	Y	Y (30 secs)	N	N
CCAL	Y	Y	Y	Y	Y	PMCX	Y	MOCX	N	N	N	N
CLOS	N	N	N	N	N	-	N	-	N	N	N	N
DSRY	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
EOA	N	N	N	N	N	-	N	-	N	N	N	N
EOBT	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
ERRR	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
FAST	Y	Del Only	Y	N	N	-	N	-	N	N	N	N
HALT	Y	Del Only	Del Only	N	N	-	N	-	N	N	N	N
MOC1	Y	Y	Y	Y	Y	PMC2	N	-	N	N	N	N
MOCX	Y	Y	Y	Y	Y	PMC1	N	-	N	N	N	N
MOE1	Y	Y	Y	Y	N	-	N	-	N	N	N	N
MOEX	Y	Y	Y	Y	Y	PME1	N	-	N	N	N	N
NOTR	Y	N	Del Only	N	N	-	N	-	N	N	N	N
OB15	Y	Del Only	Y	N	Y	AESP	N	-	N	N	N	N
OB25	Y	Del Only	Y	N	Y	AESP	N	-	N	N	N	N
OBC	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
IOBT	Y	Del Only	Y	N	Y	AESP	N	-	Y	Y (30 secs)	N	N
OBT1	Y	Del Only	Y	N	N	-	N	-	N	N	N	N
OBT2	Y	Del Only	Y	N	Y	AESP	N	-	N	N	N	N
OBT3	Y	Del Only	Y	N	N	-	N	-	Y	Y (30 secs)	N	N
ODRM	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
ODRS	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
OESP	Y	Del Only	Y	N	N	-	N	-	N	N	N	N
OPEN	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
PMC1	Y	Y	Y	Y	Y	PMC2	N	-	N	N	N	N
PMC2	Y	Y	Y	Y	Y	-(Volume)	N	-	N	N	N	Y
PMCX	Y	Y	Y	Y	Y	PMC2	Y	MOC1	N	N	N	N
PME1	Y	Y	Y	Y	N	-	N	-	N	N	N	N
PMEX	Y	Y	Y	Y	N	-	Y	MOE1	N	N	N	N
POB1	Y	Del Only	Y	N	N	-	N	-	N	N	N	N
POBT	Y	Y	Y	Y	Y	PMEX	Y	MOEX	N	N	N	N
RSTD	Y	Y	Y	Y	Y	PMEX	Y	MOEX	N	N	N	N
SPTP	Y	Del Only	Y	N	N	-	N	-	N	N	N	N
SSPD	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
STBY	Y	Del Only	Y	N	N	-	N	-	N	N	N	N

Period Name	LO Entry / Deletion	MO Entry / Deletion	CP Entry / Deletion	Auction Call	Price Monitoring Enabled	Price Monitoring Period	MO Extension Enabled	MO Extension Period	Uncross at Start	Random Start	Calculate VWAP Price	Closing Volume Check
SUS1	N	N	N	N	N	-	N	-	N	N	N	N
SUSP	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
SYSP	Y	Del Only	Del Only	N	N	-	N	-	N	N	N	N
VWPT	Y	Del Only	Y	N	N	-	N	-	N	N	Y	N
VWPX	Y	Del Only	Y	N	N	-	N	-	Y	Y (30 secs)	Y	N
XONE	Del Only	Del Only	Del Only	N	Y	AESP	N	-	N	N	N	N

## Appendix 4: International Retail Service – period rules

Please note that these period rules may be subject to change

Period Name	LO Entry / Deletion	MO Entry / Deletion	CP Entry / Deletion	Auction Call	Price Monitoring Enabled	Price Monitoring Period	MO Extension Enabled	MO Extension Period	Uncross at start	Random Start	Calculate VWAP Price	Closing Volume Check
ADMN	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
CLOS	N	N	N	N	N	-	N	-	N	N	N	N
DSRY	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
EOA	N	N	N	N	N	-	N	-	N	N	N	N
EMCP	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
ERRR	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
FAST	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
HALT	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
NOTR	Del Only	N	Del Only	N	N	-	N	-	N	N	N	N
OBC	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
MCPD	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
ODRM	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
ODRS	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
OESP	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
OPEN	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
PMCP	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
RSTD	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
SPTD	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
SSPD	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
STBY	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
SUS1	N	N	N	N	N	-	N	-	N	N	N	N
SUSP	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N
SYSP	Del Only	Del Only	Y	N	N	-	N	-	N	N	N	N
XONE	Del Only	Del Only	Del Only	N	N	-	N	-	N	N	N	N

## Appendix 5: SEAQ – period rules

Please note that these period rules may be subject to change

Period Name	LO Entry / Deletion	MO Entry / Deletion	CP Entry / Deletion	Auction Call	Imported Auction Call	Imported Price = Frozen	Price Monitoring Enabled	Price Monitoring Period	MO Extension Enabled	MO Extension Period	Uncross at Start	Random Start	Calculate VWAP Price	Closing Volume Check	Action
ADMN	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
CLOS	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	CHANGE
DSRY	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
EMQP	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
EOA	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
ERRR	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
FAST	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
HALT	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
INDQ	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
MQP	Y	N	N	N	N	N	N	-	N	-	N	N	N	N	
MQP1	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	DELETE
MQP2	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	DELETE
NOTR	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
OPEN	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
PMQP	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
RSTD	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
SAUC	N	N	N	N	N	N	N	-	N	-	N	N	N	N	DELETE
SMQP	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
SPTP	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
SQAL	Y	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	DELETE
SSPD	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
STBY	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
SUSP	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	
TDEX	N	N	N	N	N	N	N	-	N	-	N	N	N	N	
SQMQ	Y	Y	Del Only	N	N	N	N	-	N	-	N	N	N	N	ADD
SCRS	Y	Y	Del Only	N	Y	N	N	-	N	-	Y	Y (120 secs)	N	N	ADD
SMQ1	Y	Y	Del Only	N	Y	N	N	-	N	-	N	N	N	N	ADD
SMQ2	Y	Y	Del Only	N	Y	N	N	-	N	-	N	N	N	N	ADD
ESMQ	Y	Y	Del Only	N	Y	Y	N	-	N	-	N	N	N	N	ADD
RTD1	Y	Y	Del Only	N	Y	N	N	-	N	-	N	N	N	N	ADD
PSMQ	Del Only	Del Only	Del Only	N	N	N	N	-	N	-	N	N	N	N	ADD
SQCC	Y	Y	Del Only	N	N	N	N	-	N	-	Y	N	N	N	ADD

## Appendix 6: B45/B46 BDG mapping live service

Broadcast Service	Broadcast Data Group Name	Broadcast Data Group	CUG	NUA
UK SETS PRICES	UK ORDERBOOK prices – SET1 segment	B44	94	234181100744
UK SETS PRICES	UK ORDERBOOK prices – SET1, SET2 and SET3 segments	B45	95	234181100745
IRS PRICES	IRS Prices – INTR segment	B46	96	234181100746

## Appendix 7: Test instruments

Market Segment Code	Market Sector Code	Tradable Instrument Display Mnemonic	Currency Code	Tradable Instrument Code	SEDOL Code	Normal Market Size	Country of Register	Price Format Code
IOB	IOB1	ITS1	USD	GB0070008213	7000821	10000	ZZ	D
IOB	IOB1	ITS2	USD	GB0070008320	7000832	25000	US	D
IRS	FR1	ITS3	GBX	FR0070178100	7017810	10000	GB	D
IRS	FR1	ITS4	GBX	FR0070178217	7017821	10000	GB	D
IRS	FR1	ITS5	GBX	FR0070178548	7017854	10000	ZZ	D
IRS	FR1	ITS6*	GBX	FR0070178654	7017865	10000	ZZ	D
IRS	FR1	ITS7*	GBX	FR0070178878	7017887	10000	GB	D

\*No background scripted activity in these instruments

## Appendix 8: Glossary of terms

<b>broker participant (s)</b>	A price-taker that is enabled to execute against a committed principal in the IRS service. Usually a broker
<b>committed principal (s)</b>	A price-maker for the IRS service
<b>committed principal order</b>	A non-anonymous order which works like a limit order, except a participant is limited to entering one buy and one sell limit order in a principal capacity. This order is called a committed principal order in system terms and is used in the IOB and IRS service. For IOB purposes it is being called a 'named order' and for IRS purposes it is being called a committed principal.
<b>final cross</b>	The last imported price cross of the day which takes place at 16:45, but uses a price taken at 16:30 as execution (matching) price
<b>imported price cross</b>	A price-determination mechanism which imports the execution (matching) price from market maker quotes
<b>named order (also called a committed principal order)</b>	A non-anonymous order which works like a limit order, except a participant is limited to entering one buy and one sell limit order in a principal capacity. This order is called a committed principal order in system terms and is used in the IOB and IRS service. For IOB purposes it is being called a 'named order' and for IRS purposes it is being called a committed principal.
<b>non-persistent order</b>	An order that cannot sit on the order book, it either executes immediately or it is returned to the participant unexecuted. An at best order, fill or kill order or execute and eliminate order are examples of non-persistent orders
<b>persistent order</b>	An order that remains (sits) on the order book until it gets executed. Limit orders, market orders and committed principal orders are all examples of persistent order types
<b>preferred counterparty</b>	Ensures that execution takes place against a counterparty specified by a participant where possible. This is used by broker participants in the IRS service to specify the firm against which they want their order to execute.



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