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1.0 Purpose

In view of the regulatory changes introduced by the revised Markets in Financial Instruments Directive (MiFID II) and Markets in Financial Instruments Regulation (MiFIR), London Stock Exchange Derivatives Market (LSEDM) will adapt its trading system and exchange services in November 2017, with the goal of ensuring: (i) an orderly migration to the new versions of its system; and (ii) effectively managing the transition between the current and the new regulatory regime. While the revised LSEDM rulebook will be made available in a dedicated section in the LSEDM Document Library, it will not become effective until the new regulatory regime enters into force on 3 January 2018. However new minimum Block Trade thresholds and associated changes will be included in an updated version of the Bilaterally Negotiated Trade Guidance and Trading Services Description, which will become effective on 2 January 2018.

The objective of this document is to present:

- the roadmap of the deployment plan for technical and functional changes to LSEDM trading systems, and related approach to the testing phase of the new version of SOLA;

- the regulatory plan to introduce related changes to the LSEDM rulebook, effective 3 January 2018

We would appreciate any feedback by market participants in relation to the proposed deployment approach described in this document by 30 August 2017 to the following contacts:

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  - londontam@lseg.com

- Compliance
  - +44 (0) 20 7797 2190
  - RulesAndComplianceTeam@londonstockexchange.com

- Membership
  - +44 (0) 20 7797 1900
  - membership@lseg.com

We will publish additional information and, if necessary, amendments to this proposed approach in due course.
A summary table of the proposed approach is provided at the end of this document.

### 2.0 Document History

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Description</th>
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<tr>
<td>1.0</td>
<td>3 August 2017</td>
<td>Publication of initial version</td>
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### 3.0 References to MiFIR / MiFID II documentation published by LSEDM

The following documents are complementary to this communication. Additional documents related to our MiFIR / MiFID II programme will be published in due course.

**Rules of the London Stock Exchange Derivatives Market**

The revised LSEDM rulebook is now open for consultation until 1 September 2017. Please refer to the LSEDM Document Library for the proposed rule amendments.

**Technical documents**

For updated technical documentation regarding SOLA 11, please refer to the SOLA 11 – MiFID II section in the LSEDM Document Library.

All documents are continuously revised and may therefore be subject to change.

**MiFID II Updates**

For updates on the MiFID II programme please refer to the MiFID II microsite.
4.0 Key Dates

The key dates for the migration plan to the new version of the SOLA trading system are as follows:

<table>
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<th>SOLA (Equity Derivatives)</th>
<th>SOLA (Interest Rate Derivatives)</th>
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<tr>
<td>Current version</td>
<td>SOLA 9</td>
<td>SOLA 9</td>
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<tr>
<td>New version</td>
<td>SOLA 11</td>
<td>SOLA 11</td>
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<tr>
<td>CDS go-live</td>
<td>21 July 2017</td>
<td>7 September 2017</td>
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<tr>
<td>Customer Dress Rehearsal 1 &amp; 2</td>
<td>7 October 2017 / 21 October 2017</td>
<td>7 October 2017 / 21 October 2017</td>
</tr>
<tr>
<td>Go-live</td>
<td>13 November 2017</td>
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In order to ensure a smooth transition between the current and the new regulatory regime, SOLA 11 will be deployed in production in advance of the date of legal entry into force of MiFIR / MiFID II on 3 January 2018.

Market participants are informed that:

- The deployment of SOLA 11 will require a significant update of the structure of trading and market data protocols, in order to handle the additional information required by specific MiFIR / MiFID II provisions and related Commission Delegated Regulations. The new structure of these protocols will be deployed in production on 13 November 2017 (technical go-live date of SOLA 11), as detailed in the table above;

- Market participants will be required to conform to these new versions of trading and market data protocols in advance of the go-live date (as set out in the technical specifications), and be able to properly handle new information required by incoming/outgoing technical messages; and

- At the technical go-live date, SOLA 11 will introduce several functional enhancements that are required by MiFIR / MiFID II. Nevertheless, certain functionalities and configurations required to properly implement MiFIR / MiFID II provisions will remain ‘inactive’ until 3 January 2018. In order to facilitate testing by market participants of functionalities and system configurations that will be activated only on 3 January 2018, during the testing phase of SOLA 11 some specific instruments will be configured in CDS according to the expected behaviour that will be activated on 3 January 2018;
Minimum Block Trade thresholds and associated technical changes in regards to Bilaterally Negotiated Trades that are required to ensure compliance with MiFIR / MiFID II will become effective on Tuesday 2 January 2018, one day in advance of MiFIR / MiFID II's legal entry into force on Wednesday, 3 January 2018.

5.0 Deployment Approach

Each of the following sections describe the technical changes LSEDM will make to implement MiFIR / MiFID II, including any necessary transitional provisions, as well as references to the updated LSEDM rulebook and supplementary documents, as follows:

5.1 Order record keeping and transaction reporting
5.2 Microsecond granularity and UTC timestamps
5.3 Matched principal trading capacity
5.4 Pre-trade transparency
   a. Bilaterally Negotiated Trades
   b. Iceberg orders
5.5 Post trade transparency
5.6 Pre-trade controls
5.7 Liquidity provision activity
5.8 Stressed market conditions
5.9 Proposed deployment approach - Summary table

5.1 Order record keeping and transaction reporting

Messages from participants to the Exchange

In order to comply with the MiFIR / MiFID II trading venue record keeping obligations, LSEDM will require its Members to provide, for each order/quote message at order entry/modification/cancellation, additional information regarding:

- the identity of the direct client of the market participant that is submitting the order/quote;

- the identity of the person or algorithm within the investment firm that is responsible for the investment decision;

- the identity of the person or algorithm within the investment firm that is responsible for the execution of the order;

- whether an order has been inserted into the trading system by a DEA client;

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1 In the format of ‘short codes’ and related qualifiers.
whether an order has been inserted into the trading system by an algorithm of the Member or of a client of the Member.

In order to ensure an orderly technical migration, LSEDM has decided to deploy all necessary changes to native SAIL and FIX trading protocols (including Drop Copy and Post Trade Gateway) in use by SOLA that are required to collect this new information on 13 November 2017 (technical go-live date of SOLA 11).

Please note that LSEDM will not require the additional fields to be populated with legitimate data before 3 January 2018. However, market participants will be required to properly handle the new structure of trading protocols and complete the new fields in order/quote entry messages by the go-live date for orders/quotes to be accepted.

Specific transitional provisions will be applied as part of the change plan of LSEDM’s systems and services at the go-live date of SOLA 11. These provisions will be related to technical requirements for market participants to populate the new fields in order and quote entry/modification/cancellation messages in order to have their messages accepted by the trading system.

The Technical Specifications of LSEDM will contain information on the required format of order/quote messages and related long codes to comply with MiFIR / MiFID II. Market participants will be required to strictly adhere to that format by 3 January 2018 in accordance with the revised LSEDM rulebook, effective on the same date.

MiFIR / MiFID II releases of the LSEDM rulebook (which is already out for consultation, and will be finalised in Q4 2017) and further Technical Specifications to be issued in due course will contain:

- requirements for market participants as to how to acceptably populate the new mandatory fields in order/quote entry messages: (i) during the transitional phase and (ii) after 3 January 2018; and

- requirements for market participants to provide and maintain an accurate mapping of identification codes in the Member Portal effective 3 January 2017. These will include (i) short codes and related qualifiers inserted in order/quote messages, and (ii) related ‘long codes’ as required by Commission Delegated Regulation (EU) 2017/580 (“RTS 24”) (e.g. Legal Entity Identifiers of Member Firms and clients of Member Firms, identifiers of natural persons acting as clients, investment decision makers or executors of an orders, and algorithms).

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2 Dates on the availability of the Member Portals to support compliance with MiFID II will be announced in a separate notice
Messages from the Exchange to participants

LSEDM will provide additional information concerning orders and transactions executed on its trading venues (e.g. the “Waiver indicator”, as described in Field 61 of Annex I, Table 2 of Commission Delegated Regulation (EU) 2017/590 (“RTS 22”)) in order to support Member Firms in complying with their order record keeping and transaction reporting obligations. This information will be provided to participants as part of the deployment of the new version of trading protocols at the go-live date of SOLA 11 on 13 November 2017.

For Interest Rate Derivatives, a Trade Identifier will be disseminated to LCH in the trade message and will be passed through to Listed Rates Clearing Members though the clearing interface in the LCH AE/AS trade and post-trade messages. The current Synapse Execution ID field will be used (@ExecId on AE/AS message) to disseminate the Trade Identifier. This will replace the Execution identifier that is currently populated in the Execution ID field. Members are advised to evaluate any impact due to the change in the content of this field.

Customers can use the Trade Identifier disseminated via the Synapse Execution ID field to reconcile execution reports sent via the FIX and SAIL trading interfaces. Customers should concatenate Instrument ID + Group ID + Trade Number from SAIL NT/NL/NX/NY messages to reconcile with LCH Trades and / or use tag 17 ExecID from FIX execution reports (35=8) to reconcile with LCH Trades.

For full details regarding the new structure of trading protocols, the list of new mandatory fields in order and quote entry/modification/cancellation messages, and new information included in outgoing messages, please refer to the technical documents of the MiFID II release in the LSEDM Document Library.

5.2 Microsecond granularity and UTC timestamps

In the context of adapting trading protocols to MiFIR / MiFID II requirements, the format and precision of timestamps will also be adapted according to the requirements of Commission Delegated Regulation (EU) 2017/574 (“RTS 25”). While this requirement is mandated by 3 January 2018, LSEDM will introduce the new format and level of precision of timestamps (where necessary\(^3\)) at the go-live date of SOLA 11 on 13 November 2017.

Market participants will therefore be required to adapt their applications to the new timestamps by this date.

For full details regarding the new structure and level of precision of timestamps in trading protocols and market data feeds, please refer to the technical documentation provided in the LSEDM Document Library.

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\(^3\) Format of timestamps to microsecond granularity is already available on the SOLA trading system.
5.3 Matched principal trading capacity

Order record keeping and transaction reporting requirements of MiFIR / MiFID II will require LSEDM to accept orders inserted and trades executed in its trading systems under ‘matched principal’ trading capacity from 3 January 2018. LSEDM is planning to enable insertion of orders/quotes under this new trading capacity by market participants on 3 January 2018. Orders entered with ‘matched principal’ trading capacity before this date will be rejected.

On 3 January 2018 UserIDs and TraderIDs for SOLA that are already enabled to submit orders on both own account and client account, will be also enabled to submit order/quote messages under the new ‘matched principal’ trading capacity.

5.4 Pre-trade transparency

The new regulatory regime regarding pre-trade transparency requires LSEDM to obtain approval for pre-trade transparency waivers in order to offer functionalities to insert orders and execute trades without full pre-trade transparency. The management of the new regime will impact the way Bilaterally Negotiated Trades (including cross orders and block trades) and iceberg orders are currently working. Functioning of stop orders will remain unchanged.

Bilaterally Negotiated Trades

Existing functionalities supporting Bilaterally Negotiated Trades will remain unchanged until 2 January 2018. Accordingly, no changes to existing LSEDM Rules in this respect (especially in regards to the minimum Block Trade Thresholds) will be introduced at the SOLA 11 go-live date. Changes to functionalities impacted by the MiFIR / MiFID 2 transparency regime will be live on 2 January 2018.

Change of the Block Thresholds

MiFIR / MiFID II will require LSEDM to prevent the execution of Bilaterally Negotiated Trades on liquid instruments below the “pre-trade large-in-scale” thresholds. For this reason, existing minimum Block Trade minimum thresholds will be revised in light of the pre-trade LIS thresholds that have been defined and publicly communicated by ESMA in July 2017. LSEDM is planning to: (i) revise its Block Trade minimum thresholds, and (ii) prevent execution of Block Trades below the pre-trade LIS threshold for liquid products to comply with MiFIR thresholds on 2 January 2018. Accordingly, the Bilaterally Negotiated Trade Guidance document will be updated with revised block thresholds and other requirements (such as aggregation rules) and made effective 2 January 2018.

Other changes

LSEDM will introduce enhancements to price validation rules for Bilaterally Negotiated Trades in order to handle situations where no prices (i.e. bid and offers) for instrument are available on the order book. LSEDM is planning to activate this new pre-trade price control for Bilaterally Negotiated Trades on 2 January 2018.

Furthermore, prices of executed Block Trades will stop updating the following market statistics on LSEDM markets:
• last trade price; and
• minimum and maximum price for the day.

Cross orders will continue to contribute to quantity statistics for the day.

This new behaviour will be activated on 2 January 2018.

**Iceberg orders (minimum total value)**

The new regulatory regime is mandating LSEDM to introduce a new control relating to the minimum size of an iceberg order, at order entry and following any user-initiated modification. The minimum allowed size for an iceberg order under MiFIR / MiFID II rules, including the visible and hidden part of the iceberg order, is €10,000 (or an equivalent amount) in terms of notional value for derivatives.

LSEDM is planning to activate this new minimum order size control for iceberg orders on 13 November 2017 (technical go-live date SOLA 11).

### 5.5 Post trade transparency

The new regulatory regime regarding post-trade transparency is requiring LSEDM to provide immediate post trade transparency by disseminating information regarding transactions executed on its trading venue in a new, standardised format, as defined by Commission Delegated Regulation (EU) 2017/583 (“RTS 2”) for non-equity instruments.

In order to comply with this requirement, LSEDM will:

• add a new message in HSVF protocol for the LSEDM markets, replicating the structure and formats required by RTS 2 (‘PT’ message); and

• amend existing trade and reference data messages in the HSVF native market data protocol (SAIL) for the LSEDM market, in order to allow participant to fully rebuild the contents required by RTS 2 without relying on other data feeds.

For full details, please refer to technical documents as provided in the LSEDM Document Library.

These changes to existing messages, and the availability of the new MiFIR / MiFID II compliant messages, will be deployed in production at the go-live date of SOLA 11 on 13 November 2017.

### 5.6 Pre-trade controls

In order to comply with the new regulatory regime regarding pre-trade controls, LSEDM will introduce a new exchange-level, pre-trade control on the maximum size of an incoming order/quote, defined in terms of notional value.
Where an order/quote is received by the system with a notional value above the specified threshold, it will be rejected.

A revised version of the LSEDM Trading Services Description will include the definition of ‘notional value’ and applicable thresholds of the new maximum allowed notional value for an individual order/quote. This will be released prior to go-live on 13 November 2017 and made available on the LSEDM Document Library.

5.7 Liquidity provision activity

In order to correctly classify orders entered in the trading systems and trades executed under a market making/liquidity provision agreement with the trading venue or with an issuer - as trading venues are required to do by the new order keeping regime⁴ - LSEDM will adjust existing configurations to access SOLA. Dedicated TraderIDs will be introduced, allowing market participants to insert orders and/or quotes only on the financial instruments under their signed market making / liquidity provision agreement.

This new configuration will be applicable to:

- Member Firms engaged in algorithmic trading to pursue a market making strategy that, as a consequence, enter into a market making agreement with the trading venue;
- Member Firms dealing on own account that have entered into a liquidity provision agreement with LSEDM;
- Member Firms that have entered into a liquidity provision agreement with LSEDM but delegated the obligations therein to a client.

LSEDM will consider only the orders and quotes inserted in the trading system using these dedicated TraderIDs, and related executed trades, as part of the market making/liquidity provision activity of the participant, including monitoring of obligations and attribution of any applicable incentive.

Dedicated naming conventions will be used for these TraderIDs, as described in technical documents that can be found in the LSEDM Document Library.

LSEDM is planning to update configurations, as described above, before 2 January 2018⁵.

5.8 Stressed market conditions

As part of the changes to market data protocols described in previous sections, Bulletin messages will be disseminated through HSVF in order to inform market participants, including market makers and liquidity providers, of the start and end of ‘stressed market conditions’ for

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⁴ Field 8 of Annex I Table 2 of RTS 24.
⁵ This change is not impacting LSEDM’s Rulebook.
specific derivative contracts (as defined in Article 6 of Commission Delegated Regulation (EU) 2017/578 ("RTS 8"). The announcement of ‘stressed market conditions’ (which will replace the concept of “fast markets”) will lead to lowered market making obligations, in comparison to ‘normal market conditions’, as concerns maximum spreads of required quotes for market makers and liquidity providers.

LSEDM will introduce revised rules and Market Making Agreements connected to the new MiFIR / MiFID II market making regime, and consequently will start to disseminate Bulletin messages declaring the start and end of ‘stressed market conditions’ for the LSEDM market on 3 January 2018.

Full details regarding the criteria determining the start and end of ‘stressed market conditions’ will be added to the Trading Services Description in due course, and once published will be available on the LSEDM Document Library.

6.0 Summary table – Deployment Approach (LSEDM Markets)

At Go-Live date of SOLA 11 – 13 November 2017

- Deployment of new version of trading protocols, including new timestamps granularity and alignment to UTC
- Deployment of new version of market data protocols (HSVF)
- Introduction of new pre-trade controls on maximum order notional value
- Iceberg orders: Introduction of new check on minimum notional value of iceberg orders at order entry/modification
- Classification of 'liquid' vs. 'not liquid' instruments included in reference data, according to ESMA’s MiFID II classification
- Deployment of new version of market data protocols (HSVF)

After Go-Live but before 2 January 2018

- Adjustment to existing TraderID configurations for market makers / liquidity providers
On 2 January 2018

- Bilaterally Negotiated Trades: Update to minimum thresholds for negotiated transactions, according to MiFID II pre-trade LIS thresholds
- Bilaterally Negotiated Trades will be disabled for size below pre-trade LIS for liquid derivatives
- Bilaterally Negotiated Trades (cross orders, where still available) will no longer contribute to the last trade price and other price statistics

On 3 January 2018

- Introduction of ‘matched principal’ trading capacity
- Communication of ‘stressed market conditions’ via market data Bulletin messages