



Service & Technical Description

Introduction of new currencies within
*Trading Service for ETFs - Euroclear Bank
settlement*

Version 1.1

23 January 2014



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Version Control

15 January 2014	First version 1.0
16 January 2014	First review changes
23 January 2014	Final Version 1.1

1. Introduction

London Stock Exchange is one of the leading global markets for ETFs with a range of products offering access to many underlying asset classes and international markets. As liquidity on our market deepens and as the investor base expands, demand continues to grow for an even wider range of products. To serve this demand, London Stock Exchange intends to work with ETF issuers and market participants to establish secondary market trading arrangements for trading and settling in Chinese Renminbi (CNY) and Hong Kong Dollar (HKD). London Stock Exchange currently supports trading and settlement of GBP and GBX, EUR and USD and this initiative will open up trading to an even wider range of market participants, deepen the investor base and provide greater trading opportunities for exchange members.

1.1. Purpose

The purpose of the document is to provide participants with an understanding of how ETF shares can be traded, cleared and settled in CNY and HKD on London Stock Exchange.

1.2. Readership

This Service & Technical Description provides an overview of the functional work required to support the market structure for trading in CNY and HKD. It provides specific details of the clearing and settlement arrangements required to support these new trading currencies for ETFs on London Stock Exchange. This document is particularly relevant to trading, compliance and technical staff within London Stock Exchange's member firms and the software providers that service them.

1.3. Overview of the introduction new trading and settlement currency for ETFs

The introduction of CNY and HKD as trading and settlement currencies for ETFs utilises the Trading Service for ETFs - *Euroclear Bank settlement* which is a dedicated Millennium Exchange electronic order book provided by London Stock Exchange. ETFs traded in new currencies will trade during standard London trading hours, on the standard London trading calendar. Settlement will be through Euroclear Bank.

* The market will be cleared through LCH.Clearnet Ltd for on-book, electronic transactions, providing pre and post trade anonymity as well as counterparty risk protection. Settlement will be through Euroclear Bank.

CNY and HKD trading will be enabled in the *Trading Service for ETFs – Euroclear Bank settlement* segment EUET and sectors UET1 and UET2.

* Subject to the necessary regulatory approvals

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1.4. Delivery time-line

Indicative timetable	
Q1 2014	Launch of new trading and settlement currencies for ETFs

ETF issuers will be able to request admission of ETFs in the new trading currencies once the production go live date has been announced.

1.5. Other relevant documentation & resources

- ***Rules of the London Stock Exchange***

The full current Rules of the London Stock Exchange in force can be found at:

www.londonstockexchange.com/traders-and-brokers/rules-regulations/rules-regulations.htm

Changes to the Rules of the London Stock Exchange and other key regulatory announcements are made by Stock Exchange Notice.

- ***Introducing and Operating ETFs (UK)***

Details of the current arrangements and requirements for listing and admitting ETFs to the existing London Stock Exchange ETF market are available at:

www.londonstockexchange.com/specialist-issuers/etps/introducingandoperatingetfsuk2008.pdf

- ***Stock Exchange Notices***

To sign up to e-mail notification of future Stock Exchange Notices and view the library of previous ones please see:

<http://www.londonstockexchange.com/traders-and-brokers/rules-regulations/change-and-updates/stock-exchange-notices/sen-home.htm>

- ***Trading Services webpage***

For more details of the London Stock Exchange's Trading Services, including the latest versions of:

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- **MIT 201 Guide to the Trading System**
(high level technical overview of Millennium Exchange)
- **Millennium Exchange Business Parameters document**
(specific configuration of each Trading Service)

www.londonstockexchange.com/tradingservices

- **Trading Service for ETFs – Euroclear Bank settlement**

Dedicated section of the website:

www.londonstockexchange.com/ETFs/Trading

- **Full Technical Specifications**

The full series of Millennium Exchange technical specifications can be found at:

<http://www.londonstockexchange.com/products-and-services/technical-library/millennium-exchange-technical-specifications/millennium-exchange-technical-specifications.htm>

- **Service Announcements**

Live Service changes and other trading and product news are notified by Service Announcements. To sign up to e-mail notification of future Service Announcements and view the library of previous ones please see:

<http://www.londonstockexchange.com/products-and-services/technical-library/service-announcements/service-announcements.htm>

- **Live Service Portal**

The current system status of the London Stock Exchange's services is displayed on its Live Service Portal. This is the mechanism for the London Stock Exchange communicating any market intervention actions it takes as result of a service interruption. Participants can also register to receive both SMS text and e-mail notification of status changes of the portal which can be found at:

<http://liveservice.londonstockexchange.com/en/>

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- **Trading database tools**

To help you keep your trading database synchronised on a real time basis, you may wish to subscribe to either the Datasync Email Service or the Datasync Daily Tradable Instrument Report (DTI). To find out more please see:

www.londonstockexchange.com/products-and-services/reference-data/datasync/datasync.htm

Tel: +44 (0)20 7797 1220, STX: 31220
e-mail: datalect@lseq.com

1.6. Enquiries

- **Technical enquiries**

Please contact your Technical Account Manager if you have any Technical or Functional questions about the Millennium Exchange Trading services outlined in this document:

Telephone: +44 (0)20 7797 3939
e-mail: londontam@lseq.com

- **Trading Services enquiries**

Enquiries in connection with London Stock Exchange's business operation of the New *Trading and Settlement Currencies* may be directed to:

Telephone: +44 (0)20 7797 3921
e-mail: etfs@lseq.com

2. Summary: Introduction of new trading and settlement currencies for ETFs

Universe	ETFs denominated in any currencies can be traded and settled in CNY and HKD.
Trading System	The new trading currencies, CNY and HKD, are supported via <i>Trading Service for ETFs – Euroclear Bank settlement</i> .
Trading Access	Subject to supporting appropriate clearing and settlement arrangements, open to all London Stock Exchange member firms and their customers (including DMA and Sponsored Access)
Market Data Services	Level 2-ITCH channel D Group Ticker Plant channel D
Market Hours - London time	Opening Auction Call 07:50 - 08:00* Regular Trading 08:00* - 16:30 Closing Auction Call 16:30 – 16:35* Closing Price Crossing Session at London Stock Exchange closing auction price for approximately 5 minutes following end of closing auction Off book trade reporting 07:15 - 17:15 * subject to price monitoring extensions and a random period of up to 30 seconds
Trading Calendar	ETFs will trade on all London Stock Exchange business days. For the days when the <i>Trading Service for ETFs – Euroclear Bank settlement</i> will not be available for trading please see: www.londonstockexchange.com/businessdays
Trading Currencies	CNY and HKD
London Stock Exchange Rules	The introduction of CNY and HKD currency traded and settled ETFs will be governed by the Rules of the London Stock Exchange.
Order Types	All standard order types supported; including the ability for

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	registered market makers to use executable quotes
Trade Types	All standard London order book and non-MiFID off- book trade types
Clearing	All order book trades will clear through LCH.Clearnet Ltd. Member firms must have confirmed clearing arrangements with LCH.Clearnet Ltd to access the order book service
Settlement	All order book trades will settle in Euroclear Bank on a T+3 basis. Member firms must have confirmed settlement arrangements in place with Euroclear Bank to trade securities on book on the Trading Service for ETFs. Note: London Stock Exchange will adopt the T+2 settlement basis from 6 October 2014
Settlement Calendar	ETFs within the trading service will have a dedicated settlement calendar. For further information on non settlement dates please refer to: www.londonstockexchange.com/businessdays
Minimum Order Size	1 share
Lot Size	1 share
Exchange Market Size	Minimum market maker obligation size and driver for Iceberg minimum peak will to be determined at instrument level
Tick Regime	The tick regime is detailed in the Price Format Section of the <i>Millennium Exchange Parameters document</i> .
Order Book Price Protection	As per London Stock Exchange standard ETF market
Larger Order Threshold	The minimum consideration size required for the submission of Hidden Orders is detailed in the <i>Millennium Exchange Parameters document</i> .
Delayed off book trade regime	The securities delay regime for ETFs is detailed in the <i>Millennium Exchange Parameters document</i> .
Regulatory Status	Securities on the <i>Trading Service for ETFs – Euroclear Bank settlement</i> will be Regulated Market segments.
Datasync	Confirmation of new instruments and changes to existing instruments will be provided on London Stock Exchange's subscription reference data service.

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Stock Situation Notices	N/A
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3. Trading

3.1. Millennium Exchange Business Parameters Document

The **Millennium Exchange Business Parameters document** contains full details of the specific configuration of each Trading Service in force at that time and as such will always reflect the latest position. Therefore where the Millennium Exchange Business Parameters document differs from any information contained in this document, the **Millennium Exchange Business Parameters document** prevails.

3.2. Trading service

The *Trading service for ETFs – Euroclear Bank settlement* consists of the following trading segments:

Trading Service	Segment Code	Segment Description
Trading Service for ETFs – Euroclear Bank settlement	EUET	ETFs – Euroclear Bank settlement

Each trading segment is in turn divided into trading sectors which are used for administrative purposes to allow easy identification of the market maker maximum spread in force and whether there is minimum order size in place.

Segment Code	Sector Code	Sector Description	Market Maker Maximum Spread	Exchange Market Size
EUET	UET1	Euroclear (UCITS)	5%	1*EMS
EUET	UET2	Euroclear (non-UCITS)**	5%	1*EMS

EMS = Exchange Market Size is the minimum size in which a market maker must quote and is set at security level

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** Subject to the necessary regulatory approvals

3.3. Trading Cycle

The following scheduled trading cycle will operate for securities traded in new currencies. And follow the trading cycle of other SETS securities, including standard ETFs.

All London time	Standard Day		Final trading day before Christmas. Final Trading day of calendar year	
	Start	End	Early Close Day Start	Early Close Day End
Pre-Trading	07:00:00	07:50:00	07:00:00	07:50:00
Opening Auction Call	07:50:00	08:00:00	07:50:00	08:00:00
Regular Trading	08:00:00	16:30:00	08:00:00	12:30:00
Closing Auction Call	16:30:00	16:35:00	12:30:00	12:35:00
Closing Price Publication Session	16:35:00	16:35:01	12:35:00	12:35:01
Closing Price Crossing Session	16:35:01	16:40:00	12:35:01	12:40:00
Post Close	16:40:00	17:15:00	12:40:00	13:15:00

Unscheduled Trading Sessions

The following unscheduled trading sessions may also arise; see section 11 of **MIT 201 Guide to the Trading System** for more detail on the Service Interruption Protocol:

- Opening auction call – follows a price monitoring interruption to continuous trading
- Resume (auction call) - precedes resumption of continuous trading where unscheduled interruption to trading was for reason other than the invocation of price monitoring
- Halt
- Suspend

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- Pause
- Halt & Close

3.4. Calendar

Details of the trading calendar for the new trading currencies will be made available at:

www.londonstockexchange.com/businessdays

3.5. Opening Prices

The opening prices for ETFs within trading segment EUET will be set by the earlier of the opening uncrossing trade (UT) or where no opening UT, the first Order Book trade of the day (AT) on the trading service.

3.6. Closing Prices

Closing prices will be set by the closing UT or where no UT by the mid of best bid-offer before start of the closing auction. If there is not a complete bid and offer the last AT that day will be used and if there is no order book trading that day the previous close will be used.

Where a closing auction takes place a Closing Price Crossing Session will be invoked allowing up to 5 minutes of electronic trading on the trading service at that day's closing price.

3.7. Order Types

The table overleaf summarises the orders and quote types supported for the new trading currencies. More information on Time in Force applicable to each can be found in ***MIT 201 Guide to the Trading System***.

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Order Type	Description	Available on Trading Service for ETFs
Limit Order	A Limit Order is an anonymous priced order that is fully displayed when persistent in an order book and may execute at prices equal to or better than its limit price. Limit Orders never have price priority over market orders	Yes
Market Order	A Market Order is un-priced, and therefore not price forming, but has price priority over all priced orders. Market Orders cannot persist on the order book during continuous trading but can during an auction. Any that remain unexecuted following the completion of the auction will be automatically deleted.	Yes
Stop Limit Orders	A Stop Limit Order is a Limit Order that will remain unelected (will not be entered into order book) until the stop price is reached. Once elected, a Stop Limit Order will be treated as a regular Limit Order.	Yes
Stop Orders	A Stop Order is a Market Order that will remain unelected (will not be entered into order book) until the stop price is reached. Once elected, it will be treated similar to a regular Market Order.	Yes
Iceberg Orders	An Iceberg Order publicly displays only a portion of its total volume that is available for execution. The maximum displayed amount, known as the peak size, and the total size of the order can be specified by the participant and must be above specified minimums. Where enabled, customers have the option to have the refreshed peak size randomised. On each peak refresh, the size will be randomised within a set band above the value of the initial peak size entered with parameters published in the Millennium Exchange Business Parameters document.	Yes
Mid Price Pegged Orders	Non-displayed order which must exceed in size the relevant MIN RESERVE ORDER VALUE trading parameter on entry. Its limit updates to the mid of the security's visible best bid/offer	Yes
Named Orders	A Named Order is a non-anonymous limit order.	No

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Executable Quotes	Only for use by participants that are registered in individual instruments as a market maker. Fully visible, electronically executable, named, dual sided quotes that must meet prescribed size and spread requirements on entry.	Yes
Firm Quotes	Only for use in quote book securities.	No

3.8. Price Format Schedule

ETFs traded in CNY and HKD will follow dynamic tick regime described below:

<u>Dynamic Price Format schedule for CNY and HKD</u>			
Range	Price Format Code	Price Format Description	Price Format Value
ETFs - Euroclear Bank settlement			
TM_41: CNY / HKD			
0 - 9.99	J	One hundredth	0.01
10 - 49.98		One fiftieth	0.02
50 - 99.95	V	One twentieth	0.05
100 or more	X	One tenth	0.1

3.9. Price Monitoring (circuit breakers)

The way the London Stock Exchange's price monitoring protection works is set out in section 7 of **MIT 201 Guide to the Trading System**. A full list of parameters can be found in the **Millennium Exchange Business Parameters** document.

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3.10. Market Maker Registration

The obligations of market makers in order driven securities are set out in rules 4100 - 4110.5 of the Rules of the London Stock Exchange, where registered market makers use Executable Quotes (EQ) to display their quotes.

The form for market maker registration / deregistration for individual securities is called the **Registration Information Form** and is available at the following link:

www.londonstockexchange.com/traders-and-brokers/rules-regulations/formsagreements/registration-information-form.xls

3.11. Trade Types

The table below shows the trade types that will be available on the EUET segment for ETFs.

The trade type indicator generated automatically as a result of an order book execution varies according to the type of trading session in which the execution occurred.

Trade Type	Description
AT	Automatic Trade – order book trade resulting from continuous trading period
UT	Uncrossing Trade – order book trade resulting from an auction match.
PT	Closing Price Crossing Session trade – order book trade resulting from the session that takes place after the closing auction has generated the day's closing UT. Executions can only take place at day's closing price for more details see MIT901 – Guide to Millennium Exchange Functional Release Q2 2012.

Off-book trading of ETFs by London Stock Exchange member firms is governed by rule 3000.3 of the Rules.

The full range of trade types are contained in the **Millennium Exchange Business Parameters** document.

As per the FIX standard, all times on FIX trading messages must be specified in UTC on all interfaces.

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3.12. Symbology

ETFs are identified on trading messages using a unique InstrumentID.¹ The InstrumentID remains constant for the lifetime of that line of the security.

ISIN changes always represent the creation of a new line of the security and as such will lead to a new InstrumentID.

London Stock Exchange provides InstrumentIDs via the Reference Data Service.

Full details of the interface are specified in *MIT401 – Guide to Reference Data Services*.

3.13. Market Supervision

The market will be monitored and regulated in the same way as all other London Stock Exchange Markets. Market Supervision can be contacted on:

+44 (0) 20 7797 3666

(STX 33666) – option 2

¹ Specified in Tag 48 – SecurityID on FIX messages

4. How to gain access to trade ETFs in CNY and HKD

4.1. Member Firm Access

Need in place the following:

- direct or indirect trading connection with Millennium Exchange;
- clearing arrangements in place with LCH.Clearnet Ltd; and
- completed London Stock Exchange Static Data Form for ETFs – Euroclear Bank settlement

4.1.1. Joining Instructions

To confirm clearing and settlement arrangements with London Stock Exchange, it is necessary for all firms to complete a new Static Data Form. This is independent from any previous information a member firm may have provided for their SETS and International Order Book arrangements. It will encompass all data needed by London Stock Exchange and LCH.Clearnet Ltd to set up customers for trading on the *Trading Service for ETFs – Euroclear Bank settlement and the new trading currencies*.

The ETFs – Euroclear Bank settlement Static Data Form can be found at:

www.londonstockexchange.com/traders-and-brokers/rules-regulations/formsagreements/formsagreements.htm

If the member firm is already set-up to access the Trading Service for ETFs-Euroclear Bank Settlement and would like to be able to trade new currency lines, they are not required to submit a new static data form.

London Stock Exchange's Client Implementation team will be processing member firm's clearing and settlement static data. This should be e-mailed to:

clientimplementation@lseg.com

The team can also be reached for telephone enquiries on: +44 (0)20 7797 3232

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4.1.2. Off Book trading

All member firms will be able to submit off book trade reports in securities on trading segment EUET. It is a requirement that members have arrangements in place to settle any such trades. Unless agreed by both counterparties otherwise the default place of settlement for **on Exchange** off-book trades in EUET will be Euroclear Bank.

4.2. Non-members of London Stock Exchange

Non-members will be able to trade ETFs in CNY and HKD through London Stock Exchange member firms. Both Direct Market Access and Sponsored Access are available through participating member firms.

4.3. Market Access

The new trading currencies are supported by the Trading Service for ETFs-Euroclear Bank Settlement; hence member firms will be able to access the *Trading Service* via existing trader group IDs by requesting the additional market source to be added to the IDs in question.

Member firms will be able to access the *Trading Service for ETFs – Euroclear Bank settlement* via the existing Technical Connections. If a new Technical Connection is required, contact the Technical Account Management team.

If a member firm wishes to become a registered market maker in a security within the *ETFs - Euroclear Bank settlement* service, the member firm will have to follow the existing procedure and submit the Registration Information Form and specify which ID in which the member would like to make markets.

4.4. Market Data

ETF data will be broadcast on the Existing Market Data groups. These are Level 2-ITCH channel D (Structured Products) and Group Ticker Plant channel D (Structured Products).

Technical details for this service are available at:

Level 2-ITCH:

www.londonstockexchange.com/products-and-services/technical-library/millennium-exchange-technical-specifications/millennium-exchange-technical-specifications.htm

Group Ticker Plant:

www.londonstockexchange.com/products-and-services/millennium-exchange/documentation/documentation.htm

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4.5. Customer Testing

Customers should note that trading ETFs in CNY and HKD will be available on the CDS environment from Monday 20 January 2014.

Customers are required to re-certify their software if they make a code change to support this service. Details of the conformance obligations and customer testing service are available here:

www.londonstockexchange.com/products-and-services/millennium-exchange/millennium-exchange-migration/mit501.pdf

Customers wishing to participate in the end to end testing must also arrange to be connected to the LSE CDS environment on the day of the test. Access to this service is provided on a Test Bookable basis or via the Continuous Access service. Customers using the Test bookable service should note that they must provide us with advance notice and must have arranged for a technical connection to this service to be in place before the test date.

Although Conformance testing is only required if code changes are made, all users are strongly advised to test the changes on the CDS environment before accessing the live service.

4.6. Reference Data

Participant and Instrument Reference data will be available from Monday 20 January 2014 for CDS and participants will be informed at a later date when available for Production. Access to this reference data is via the standard SFTP Reference data service. Full details can be found in **MIT401 – Guide to Reference Data Services** here:

<http://www.londonstockexchange.com/products-and-services/millennium-exchange/millennium-exchange-migration/mit4014.pdf>

5. Clearing and Settlement

5.1. Clearing and Settlement Data

London Stock Exchange's Client Implementation team will be processing firms clearing and settlement static data. This should be e-mailed to: clientimplementation@lseg.com

The team can be reached for telephone enquiries on: +44 (0)20 7797 3232

Clearing and settlement will be facilitated through LCH.Clearnet Ltd's EquityClear service. Whereby all functions such as margining, reporting and settlement will be processed in through the member accounts.

For information relating to clearing and settlement please contact:

ian.mackenzie@lchclearnet.com or Tel: + 44 (0) 20 7426 7265

5.2. Testing

Optional testing will commence from Monday 20 January 2014. Those firms wishing to test the *new currencies* should ensure the following is in place prior to testing:

- 1) Trading firm has a clearing relationship with an LCH.Clearnet Ltd clearing member
- 2) London Stock Exchange and LCH.Clearnet Ltd have been notified of the member's intention to test
- 3) Test static data will be required, within a static data form
- 4) Three days have been allowed for data to be loaded into the relevant trading and clearing systems

The testing session will take the form of:

- 1) Input by the trading firm of minimal test trades onto the London Stock Exchange test platform
- 2) Sending of test trades to LCH.Clearnet Ltd
- 3) Production by LCH.Clearnet Ltd of gross and net trade files at end of day
- 4) Retrieval by clearing members of the test files, or if necessary request for test files to be sent directly

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- 5) Note: LCH.Clearnet Ltd will send test settlement instructions to Euroclear Bank. The end of day (EOD) files will contain sufficient settlement information for Clearing Member to reconcile for settlement purposes

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