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PREFACE

PURPOSE

Euronext will be migrating a range of Euronext Dublin activities and instruments onto Optiq® and the related Euronext systems.

As a reminder, Migration scope will include:

- Transfer of **COB-Traded instruments related activities** from the current system onto the Euronext Optiq® platform.
- Transfer of **on-exchange off-book activities** from the current system onto the Saturn Euronext platform.
- Transfer of **ISEQ indices calculation** from the current system to the Euronext GIS platform.
- Transfer of **Euronext Market Data tradable instruments and indices dissemination** from the current system to the Euronext Optiq® MDG (Market Data Gateway).
- Entrust **post-trade operations** to European Central Counterparty N.V. (EuroCCP) as the single Central Counterparty Clearing Solution, while Euroclear UK & Ireland (EUI) will remain the provider of the central securities depository services for Irish stocks.

This document outlines the migration details regarding Euronext Dublin migration

TARGET AUDIENCE

The intended audience of this document is any client intending to connect to and trade on the Euronext Dublin markets using Optiq® and or Saturn OBOE features.

This document is for informational purposes only, and should be consulted alongside its associated documents outlined below.

WHAT'S NEW

The following lists only the most recent modification made to this revision/version. For the Document History table, refer to the summary of changes section.

REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
1.0	03 August 2018	Euronext	First release
1.1	20 August 2018	Euronext	List of instruments completed in the appendix section "7.2 List of Equities Instruments in Next EUA (formerly P-EUA) and Production Environments"
1.2	27 September 2018	Euronext	Modification of the migration date and alignment of the different project milestones across the document. Sections modified are: 1. Introduction 3.1 Overview 3.1.4 Dress rehearsals 3.2 test Plan 3.2.2. Validating Conformance tests 3.3.1 ordering order Entry Sessions to Access production

REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
			<p>3.3.3 Dress Rehearsals</p> <p>3.3.4 Customer readiness checklist</p> <p>List of instruments completed in the appendix section “7.2 List of Equities Instruments in Next EUA (formerly P-EUA) and Production Environments”.</p> <p>List of indices detailed in appendix, section “7.3 list of indices”.</p>
1.3	9 November 2018	Euronext	<p>Trading patterns, section “2.1.2 Trading patterns”</p> <p>Dublin project related EMM codes, section “2.4 Market data and Indices”</p> <p>List of instruments modified and completed in the appendix section “7.2 List of Equities and ETF Instruments in Next EUA and Production Environments”</p> <p>List of instruments added in the appendix section “7.4. List of listed but not traded Dublin ETFs in Next EUA and Production Environments”</p>
1.4	11 December 2018	Euronext	<p>Trading patterns modified, section “2.1.2 Trading patterns”</p> <p>List of indices amended in appendix, section “7.3 list of indices”</p> <p>List of instruments modified and completed in the appendix section “7.2 List of Equities and ETF Instruments in Next EUA and Production Environments”</p> <p>Dublin instruments available on Dress rehearsals, section “3.3.3.2 List of instruments available on Dress Rehearsal Days” added</p>
1.5	11 January 2019	Euronext	<p>Note added about SBE template version Dublin migration compatible in section “3.1.4.3 Euronext File Services”</p> <p>Deadlines updated in section “3.3.4 Customer Readiness Checklist”</p> <p>List of instruments completed with Symbol Index for production environment in the appendix section “7.2 List of Equities and ETF Instruments in Next EUA and Production Environments”</p> <p>List of Dublin instruments available on Dress rehearsals modified, as test instruments created for the 1st Dress Rehearsal will be discontinued for the 2nd Dress Rehearsal, section “3.3.3.2 List of instruments available on Dress Rehearsal Days”</p> <p>List of instruments deleted in the appendix section “7.4. List of listed but not traded Dublin ETFs in Next EUA and Production Environments”</p>

ASSOCIATED DOCUMENTS

The following lists the associated technical documents which either should be read in conjunction with this document or which provide other relevant information for customers.

Please refer to the version of the documents indicated or following versions.

■ Saturn Specifications and background documentation

- Euronext Global Reporting Solution - Saturn Interface User Guide v2.3
- Saturn Web Services Specifications– v2.8.8
- OBOE – Euronext Off-Book On-Exchange trades publication - Market Model overview – version 1.3
- Saturn example of OBOE upload file

■ Optiq® OEG Technical Documentation

- Euronext Cash Markets – Optiq® OEG Client Specifications - SBE Interface – v1.3.1
- Euronext Cash Markets – Optiq® OEG Client Specifications - FIX 5.0 Interface - v1.3.2
- Euronext Cash Markets – Optiq® & TCS Error List – v1.3.1
- Euronext Cash Markets – Optiq® Kinematics Specifications – v1.3.1
- Euronext Cash Markets - Optiq® Drop Copy Service V1.1.0

■ MDG Technical Documentation

- Euronext Cash Market – Optiq® MDG Client Specifications - v2.1.4
- Euronext Cash and Derivatives Markets – Optiq® File Specifications – v2.0.2
- Euronext Optiq® Market Data Gateway Production Environment v1.9 (Future version)
- Euronext Optiq® Market Data Gateway External User acceptance Environment v1.8 (Future version)

Clients are advised to also refer to the Euronext Rules and Regulations documents for more details.

For the latest version of documentation please visit <http://www.euronext.com/optiq/documentation>

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1. INTRODUCTION

Euronext announced the launch of its new generation technology programme in May 2016 and proceeded successfully with the migration of the Cash Markets to the new order entry and matching engine modules for the Cash market segments in late June 2018.

Irish Stock Exchange (ISE), which is now trading as Euronext Dublin, plans to migrate a range of Euronext Dublin activities and instruments onto Optiq® and the related Euronext systems on the 4 February 2019, pending regulatory approval.

While Optiq® **Order Entry Gateway (OEG)** and **Market Data Gateway (MDG)** do not require any system change, Dublin markets will be available by new configurations and only Saturn will be adapted to comply with specificities of the **on-exchange off-book activities** of Euronext Dublin.

Optiq® allows Euronext to deliver an enhanced multi-market trading platform, leveraging the latest technology to ensure high reliability and to significantly enhance throughput and predictable latency. The simplified and flexible system will allow shorter time-to-market to deliver new products and implement customers' requests, while creating an opportunity for customers to reduce their administrative costs. The new platform is compliant with MiFID II regulation.

1.1 SCOPE OF DUBLIN MIGRATION PROJECT

Euronext Dublin migration scope can be pictured as in the representation below:



Euronext Dublin migration scope covers listed and/or traded ETFs and Equities instruments and do not cover the following instruments:

- Euronext Dublin bonds listed but not traded on Euronext markets.
- Euronext Dublin funds listed but not traded on Euronext markets.

Full list of instruments (**57 Equities, 1 ETF and 11 indices**) included in the migration is detailed in appendix. These instruments will be available in trading groups 9A, 9B, 9C, 9D and 9E.

Euronext Dublin listed but not traded ETFs will be migrated to Euronext internal referential but won't be available for trading. Thus, they won't appear in standing data file and no information will be made available. These instruments will be listed in trading group 9H.

This document outlines the changes between the current system and Optiq® and related Euronext systems, and will accompany readers during the migration process for the big bang migration which is pending regulatory approval.

Euronext Dublin migration scope covers the following MIC Codes:

- **XMSM** for securities admitted to the **Main Securities Market (MSM)**. Please note that this market will be renamed to **Euronext Dublin**
- **XESM** for securities admitted to the **Enterprise Securities Market (ESM)**. Please note that this market will be renamed to **Euronext Growth Dublin**
- **XATL** for securities admitted to the **Atlantic Securities Market (ASM)**

Financial market place is **145**.

Financial market code is **306**.

The list of Instruments and trading groups, as the list of indices covered by Euronext Migration are detailed in appendix.

SCOPE OF MARKETS AND PRODUCTS FOR DUBLIN MARKETS

Markets and Products		
Cash markets	Equities (OEG + MDG)	✓
	ETFs (OEG + MDG)	✓
	Fixed Income (OEG + MDG)	
	Warrants & Certificates (OEG + MDG)	
	Indices (MDG only)	✓
Trade Confirmation System (TCS)	TCS (through cash market OEG + MDG of the respective asset class)	
Saturn OBOE		✓
Luxembourg Stock Exchange	Luxembourg Stock Exchange (OEG + MDG)	
Derivatives markets	Derivatives – Futures	
	Derivatives – Options	
	Commodities	

SCOPE OF SERVICES COVERED FOR DUBLIN MARKETS

Services	
End of day files	✓
Drop copy	✓
Euronext File Server (EFS)	✓

2. DUBLIN MIGRATION DESCRIPTION

The Euronext Optiq® Order Entry Gateway (OEG) provides high-speed and real-time connection to the Euronext markets. The system offers predictability, ultra-low latency, message harmonization, high availability, a reliable network solution, and a high level of scalability.

2.1 ORDER BOOK EXCHANGE TRADES

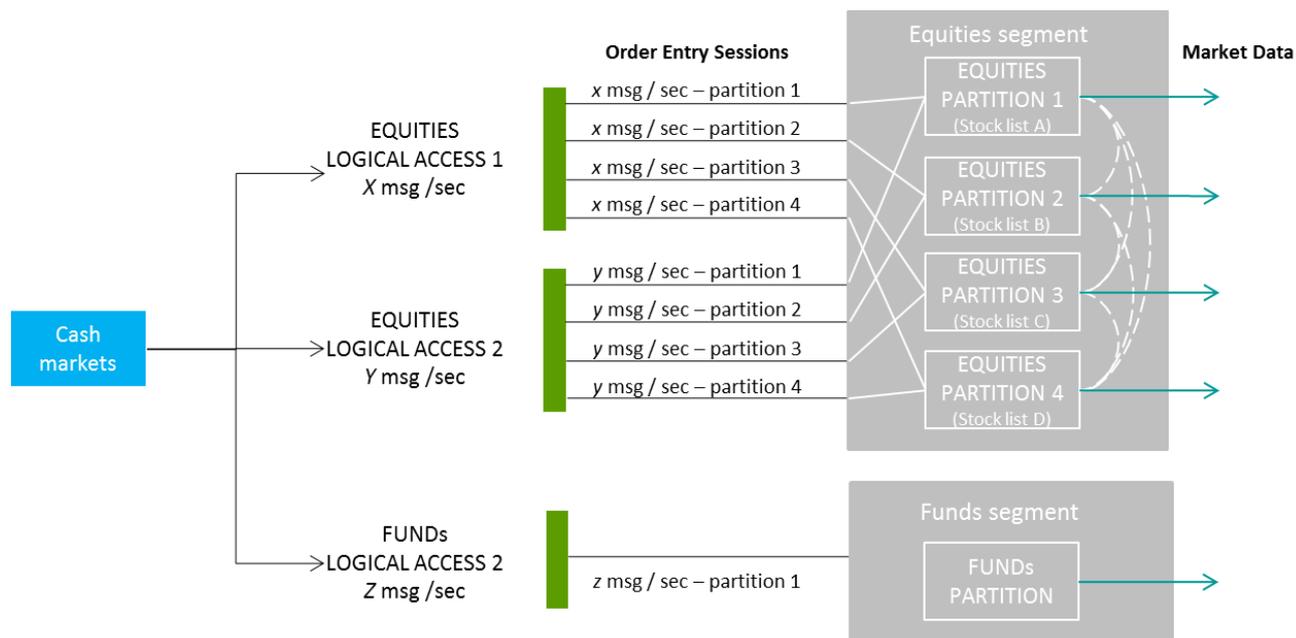
Optiq® OEG does not require any system change. Only new configuration of instruments and trading groups will be made to allow Dublin instruments to trade on Optiq® platform.

Instruments and the corresponding segment and/or partition to which it belongs is available in the Appendix.

2.1.1 Connectivity Model

Euronext’s connectivity model improves performance and stability by offering order entry sessions through logical accesses which connect to dedicated partitions in individual Cash markets Optiq® segments.

EXAMPLE: DIAGRAM OF ORDER ENTRY SESSIONS, PARTITIONS AND SEGMENTS ON EQUITIES AND FUNDS:



High reliability, significantly increased throughput and latency performance with minimal standard deviation, improved flexibility in delivery of new functionalities and products, shorter time to market as well as the improved resiliency will be ensured within Optiq® in part by the introduction of the new instrument segmentation through Optiq® Segment.

Referential standing data is provided on a daily basis for each instrument via MDG messages and files (available on EFS), identifying which Optiq® Segment and partition an instrument belongs to.

More details are available in the current version of **Euronext Optiq - Cash Markets Order Entry Gateway Sessions pricing and capacity document**, available [here](#).

2.1.2 Trading patterns

The following trading patterns will be applied for Dublin Equities and ETF. All hours are expressed in Dublin time.

Dublin Equities	
Pre-Opening Phase - Order accumulation period	06:15 to 08:00
Opening Auction	08:00:00 to 08:00:30
Continuous Trading	08:00:30 to 16:28
Pre-closing phase - Order accumulation	16:28 to 16:30
Closing auction	16:30:00 and 16:30:30
Trading-at-last phase	16:30 to 16:40
After hours trading	16:40 to 17:00

Dublin ETF	
Pre-Opening Phase - Order accumulation period	06:15 to 08:05
Opening Auction	08:05
Continuous Trading	08:05 to 16:30
Pre-closing phase - Order accumulation	16:30 to 16:35
Closing auction	16:35
After hours trading	16:35 to 17:30

2.2 OFF-BOOK ON-EXCHANGE TRADE REPORTING

In order to minimize the developments for existing members using Saturn and also to keep consistency in Saturn messages and simplify developments for new members, OBOE was built reusing existing messages used on APA (Approved Publication Arrangement). More information on APA can be found [here](#).

- Possibility to provide waiver Flags:
 - NLIQ, OILQ, PRIC & LIS with dedicated associated rules and errors codes
- Possibility to provide other MiFID II post-trade indicators :
 - ACTX, BENC, & SDIV with new rules when applicable
- Possibility to integrate dedicated Euronext Flags:
 - CP, LT & SS.
- Creation of a new dedicated trade Status, “Warning”, processing the trade but warning the participant of a potential error following consistency checks.

Saturn OBOE functionalities are fully detailed in Saturn Web Services Specifications available [here](#), and in the Off-Book On-Exchange trades Publication Market Model available [here](#).

Saturn OBOE functionalities will be available in different releases on Next EUA (formerly P-EUA) environment and have been organized as in the table below:

Phase 1			Phase 2
Release 1	Release 2	Release 3	
WEB GUI & CSV upload file Rest API JSON & CSV updated MDG	Prices controls and associated status (GUI & API)	FIX protocol for Rest API OBOE message	MDG: publication of Euronext Flags

2.3 POST TRADE OPERATIONS

EuroCCP will act as the CCP providing Irish clearing services.

Euroclear UK & Ireland (EUI) in the United Kingdom will remain the provider of the central securities depository services for Irish stocks. The electronic settlement system (CREST) will remain unchanged.

Clearing members of Euronext Dublin clients are already EuroCCP clearing members and therefore used to provide clearing services on Euronext Dublin securities, including settlement with EUI.

The Trading Member must ensure he has valid clearing arrangements with a clearing member, in order to be authorized to trade on Euronext Dublin. For this purpose, we will require the Trading Member to liaise with his Clearing Member so that this latter provides EuroCCP with:

1. One-page [Testing Form](#) (required 1 day before commencing testing, started on 24 August with EuroCCP on the testing environment)
2. One-page [Statement of Authority](#), to authorize the Trading Member for clearing Euronext Dublin trades via EuroCCP (required 2 weeks prior to big bang migration)
3. One-page [Netting Form](#), to set-up the netting for Ireland agency and principal trades (required 2 weeks prior to big bang migration)
4. Completion of the Crest Clearing and Settlement details

On receipt of the above 4 documents, EuroCCP will liaise with Euronext to ensure that Euronext and EuroCCP's systems are configured accordingly.

It is mandatory to return all the completed documentation by **Friday 23rd of November 2018** the latest and we strongly encourage members to return the forms as early as possible to ensure a smooth go live.

Euronext Dublin clients are invited to specify their clearing member by contacting Euronext CAS team or forwarding the Statement of Authority to Euronext CAS team

For any further complementary information, please visit [EuroCCP website](#).

2.4 MARKET DATA AND INDICES

Optiq® MDG does not require any system change.

Existing Market Data Channels will be renamed and used to disseminate Dublin data via Optiq® MDG as follows:

- Market data Channel #9 is renamed to "Equities Dublin" and will transport market data of all ISE equities traded on COB/OBOE
- Market data Channel #15 is renamed to "Euronext Dublin Indices" and will transport all Dublin's indices market data
- Market data Channel #1 remains unchanged but will transport, in addition to all ETFs traded today in Euronext, the Dublin ETF which is traded on COB/OBOE

Optiq® Segment	MDG Set Of Channels ID	Existing MDG Set Of Channels Name	Renamed MDG Set Of Channels
Equities	9	Equities UK	Equities Dublin
Funds	1	All Funds	NA
Indices	15	Third Party Indices	Euronext Dublin Indices

The existing Index list will remain the same, except the ISEQ General Index (ISIN IE0000506075) and the ISEQ General Index Return (ISIN IE0000512685) which will be decommissioned on the date of the migration.

The historical levels of the indices will remain valid following the migration of the indices to the Euronext GIS platform. To align the methodology of the ISEQ indices with the methodology of the Euronext blue chip indices slight changes will be made. The new ISEQ20 rulebook was made available online on 10 October 2018.

The full list of indices is detailed in appendix.

Furthermore, a new EMM code (EMM code 9) will be created for Euronext Dublin listed but not traded ETFs in order to identify them in Euronext referential and regulatory reporting. This will be totally invisible for members who will not see those instruments in Euronext referential data in Optiq.

OBOE Trades will be classified under EMM Code 5. EMM is already available in the SBE template in next EUA and production environments.

For further information, please refer to Optiq® MDG Client Specifications and Optiq® File Specifications. These documents will be updated in due course.

3. MIGRATION PLAN

3.1 OVERVIEW

The migration plan for Euronext Dublin involves a big bang Go Live which is planned on 4 February 2019, pending regulatory approval.

The migration will involve, from a member perspective, OEG, MDG, Saturn OBOE, EuroCCP and Euronext GIS.

3.1.1 Order Entry Gateway (OEG) and Market Data Gateway (MDG) EUA availability

The OEG and MDG Optiq® applications are already available for clients in the Euronext Next External User Acceptance (Next EUA (formerly P-EUA)) environment. Moreover a range of Dublin instruments is available since the **2 August 2018** on Next EUA (formerly P-EUA) for testing purposes.

Furthermore access to Next EUA (formerly P-EUA) is already set up from an ICE Data Services standpoint.

Next EUA platform is available on week days between 9:00 and 17:40 CEST, except every Wednesday morning until 13:00 CEST for maintenance.

3.1.2 Saturn Next EUA availability

The Saturn platform is already available for clients in the Next External User Acceptance (Next EUA) environment with the first release for Saturn environment for On-Exchange Off-Book functionalities (OBOE) is available since the **4 September 2018**.

Moreover, Saturn On-Exchange Off-Book functionalities described in section 2.2 have been available in different releases in the Euronext Next EUA environment as follows:

Phase 1			Phase 2
Release 1	Release 2	Release 3	
<p>Available on Next EUA on the 4 September 2018</p> <p>(WEB GUI & CSV upload file Rest API JSON & CSV updated MDG)</p>	<p>Available on Next EUA on the 4 October 2018</p> <p>(Prices controls and associated status (GUI & API))</p>	<p>Available on Next EUA on the 8 November 2018</p> <p>(FIX protocol for Rest API OBOE message)</p>	<p><i>Availability on EUA to be determined later</i></p> <p>(MDG: publication of Euronext Flags)</p>

Saturn Next EUA platform is available on week days between 7:00 and 22:00 CEST except every Wednesday morning until 13:00 CEST, for maintenance.

3.1.3 Central Counterparty EUA availability

EuroCCP is connected to the Next External User Acceptance (Next EUA) environment for clients and testing since the **24 August 2018**.

EuroCCP also advised, as part of the preparation for clearing Euronext Dublin, “End-to-End” testing is available to clients between 7 and 18 January 2019 (see communication [here](#)). The ID of the clearing house in case of a CCP clearable transaction is systematically populated on Optiq® Next EUA since 26th September (and in production since 22nd October 2018) in:

- Execution report (8) in the field called ContraBroker (375) on FIX protocol and

- Fill messages in the field called Counterpart Firm ID on SBE Protocol.

Currently, these fields are populated with a blank value in case of a clearable transaction.

For Euronext Dublin market, EuroCCP being the single CCP, such CCP ID Value will be restricted to '6'= EuroCCP, the other possible value being '1' = LCH SA (which is not relevant for the Euronext Dublin market).

For more details on CCP ID feature, please refer to CCP ID project Info Flash of 5th July 2018.

Euro CCP testing platform is available on week days between 9:00 and 17:00 CET.

3.1.4 Dress Rehearsals

In order to validate technical access to Production, trading members are invited to participate to both dress rehearsals planned on:

- **Saturday 15 December 2018**
- **Saturday 19 January 2019**

Dress rehearsals plan is detailed in later sections of this document and will be detailed in a specific Dress Rehearsal Guidelines document.

The list of trading groups that are transferred to Optiq® for migration is detailed in appendix.

Please note that upon the migration of instruments to Optiq®, these instruments will be no longer available for trading on the current trading platform.

Please note that unexecuted orders done on the current platform will not be migrated to Optiq.

Clients therefore need to ensure that the orders placed via the current platform system are purged on Friday evening after the trading hours, and re-entered to Optiq on the morning of 4th February, if required by the member.

Note that **clearing connectivity with EuroCCP is outside of the scope** of the Dress Rehearsal.

3.1.4.1 Drop Copy

Optiq® Drop Copy will be available for Dublin instruments that have migrated to Optiq®.

- After the migration to Optiq®, clients consuming Drop Copy will receive messages from the Central Order Book via the Optiq® Drop Copy only.

3.1.4.2 EOD Application Files

Trade files in the End of Day (EOD) applications for Optiq® remain in the same format as today with some adjustments, such as adjustment of values to be in line with Optiq®. Timestamps will match the ones in Optiq® and will be provided in UTC

Order files in Optiq® are changing and are provided in two different formats: XML and flat file.

For more information on EOD files, please refer to the EOD specifications available on the [Euronext website](#).

3.1.4.3 Euronext File Services

The below list of files in Euronext File Service (EFS) will be impacted by Euronext Dublin migration.

The below files for EUA are available : <https://efs-eua.euronext.com/main.html>

The below files for Production are available : <https://efs.euronext.com/main.html>

	OEG or MDG	Production set-up before Dublin migration
PrevDayCapAndVolTradeFile	MDG	One file per segment (Bonds, Equities, ETFs, Warrants, Luxembourg Stock Exchange)
CashStandingDataFile	MDG	One file per segment (Bonds, Equities, ETFs, Warrants, Luxembourg Stock Exchange, indices)
SBE Templates	OEG & MDG	One file per segment (Bonds, Equities, ETFs, Warrants, Luxembourg Stock Exchange) <i>Note: Clients are reminded that OEG and MDG SBE Templates are backward and forward compatible and are recommended to connect to Optiq platform using SBE templates version 105 or greater to be fully compatible with CCP identifier functionality</i>
TimetableFile	MDG	One single file for Cash markets
CashTickSizeReferentialFile	MDG	One file for Cash and one file for Derivatives
RepoSettlementPriceFile	MDG	One file for Cash markets

3.2 TEST PLAN

The Next EUA (formerly P-EUA) is the environment to be used for end-to-end testing of the new Optiq® OEG, MDG and Saturn for conformance testing. **On the test environment, customers are expected to (i) check their connectivity to the OEG, (ii) validate their conformance tests with an CTSG analyst and (iii) ensure they have completed end-to-end tests on the Next EUA environment**

This test environment contains the target Optiq® software with all cash segments. They are summarized below:

	Next EUA CHANGES	
	Availability in Next EUA	Info Flash / Documentation
Technical set up For connectivity testing and validation of OE sessions	Already available	Available here
OEG, MDG configuration release with new instruments and updated channels	Already available	Available here
OBOE software release on Saturn	Already available	Available here
Transfer Central Clearing Counterparties (EUROCCP) access on Next EUA, for end-to-end testing in the Optiq® testing environment	Already available	Available here
Conformance test for OEG and Validation of MDG	Already available	Available here
Validation for OBOE Service in Saturn	8 November 2018	Available here

3.2.1 Connectivity to Next EUA

As a reminder, Euronext provided Order Entry Sessions to all clients' Member Connectivity Administrator and to all providers. In addition, Drop Copy sessions were also provided to customers who filled in the order form for Next EUA. Customers who have not received their Order Entry Sessions in Next EUA are invited to contact Customer Access Services team (see contact details in the [Support](#) section of this document).

Order Entry Gateway: Clients can refer to the [Order Entry Gateway configuration document](#) for full connectivity details to the Next EUA (formerly P-EUA).

Market Data Gateway: Clients can refer to the [Market Data Gateway configuration document](#) for full connectivity details to MDG Next EUA (formerly P-EUA).

Saturn/OBOE: Clients can refer to [Saturn User Guide](#) and [Saturn Specifications](#) to have full details of the system.

3.2.2 Validating Conformance Tests

The main test environment for Euronext Dublin migration is the Next EUA (formerly P-EUA). Software has been available since September 2017 and a selection of Euronext Dublin instruments have been set up on the 2nd of August 2018, to enable customers to start testing.

Test to be Performed	Trading members wishing to use a certified Order entry and market data solution	Trading members wishing to develop their own Order entry and market data solutions	Start Date	Due Date
Order entry Conformance tests	Perform light Functional conformance tests (prior to Dress Rehearsals) on all member codes, protocols with an CTSG analyst	Perform Full conformance tests Functional (prior to Dress Rehearsals) and technical (HA – prior to Go-lives) on all member codes, protocols and segments with an CTSG analyst	13 August 2018	14 December 2018
Market Data Conformance tests	Complete Web Form check list	Perform Full conformance tests Functional (prior to Dress Rehearsals) and technical (HA – prior to Go-live)	13 August 2018	14 December 2018
Off Book On Exchange (OBOE) Validation test	Complete Web Form Checklist	Complete Web Form Checklist	3 October 2018	14 December 2018
Dress Rehearsal Participation	Mandatory	Mandatory	NA	15 December 2018 <i>and</i> 19 January 2019

Note: Migration Go Live will be mandatory for every Euronext Dublin Member, either using a certified Order Entry and Market Data solution or developing their own Order Entry and Market Data solution.

3.2.2.1 Order Entry Gateway (OEG) test

Following members and providers are required to perform a mandatory OEG **full conformance** test:

- New trading members accessing directly to Euronext Optiq® platform not conformed yet to the Optiq® Platform
- Software providers not conformed yet to the Optiq® Platform

Guidelines and scripts to follow for full Conformance testing is already available on Euronext Website. Scripts are available [here](#).

Trading members and Software providers already certified on the Optiq® platform are required only to perform an OEG **light conformance** test.

The following table describes the kind of conformance test applicable for each member and provider.

	Trading Member developer (if not conformed for Optiq®)	Member developer + using a provider (if not conformed for Optiq®)	Liquidity Provider using a provider only	Trading Member using a provider only	Provider (if not conformed for Optiq®)
Full / Light conformance	Full	Full	Light	Light	Full
Mandatory / optional	Mandatory	Mandatory	Mandatory	Optional	Mandatory

Guidelines for Light Conformance test:

Below are the scenarios that will have to be completed for Light Conformance test.

Administration Messages	Logon (100)
Submission Application Messages Equities, Funds	New Order (01)
	Ack (03)
	Fill (04)
Liquidity Provider Orders	Kill (05)
	Liquidity Provider or Market Maker
Cancellation	Liquidity Provider Account
	Trade Cancellation initiated by exchange
	Order Cancellation (Client)

Customers are invited to book a conformance test appointment (full or light) with an CTSG analyst using the email : CTSG@euronext.com

Please note that customers need to contact [CTSG team](#) least 72 hours prior to the desired timeslot. As a reminder, no conformance test will take place on Wednesday morning as the Next EUA platform is closed for maintenance until 13:00 CEST.

Please note that customers will not be able to access the Production environment neither during the Dress Rehearsal nor for Go-Live unless they have completed their **conformance tests** on the Dublin Instruments.

3.2.2.2 High Availability testing in Next EUA

High availability test is mandatory **only** for customers that are required to complete the **full conformance test**. Those customers can join one of the failovers planned as follows:

Single partition

- Dates: Every Tuesday from 24 July 2018 to 13 December 2018
- Protocols: SBE and FIX
- Details:

Segment	Time
Funds/ETF Partition ID: 20 – Target IP : 212.197.222.14	15:00 CEST

Multipartition

- Dates: Every Friday from 27 July 2018 to 13 December 2018
- Protocols: SBE and FIX
- Details:

Segment	Time
Equities Partition ID: 11 – Target IP : 212.197.222.5	15:00 CEST

Full details regarding High availability test can be found on Section 7 in the document [here](#).

3.2.2.3 Market data Gateway (MDG) test

MDG **full conformance** test is only mandatory for new trading members, software providers or market data providers not conformed yet to the Optiq® Platform.

Full details regarding MDG full conformance tests can be found [here](#).

Trading members, software providers or market data providers already certified on the Optiq® platform are required only to complete and submit the **check list web form** [here](#).

3.2.2.4 Saturn OBOE test

On Saturn system the definition of full or light conformance tests does not apply.

On Saturn system clients are only requested to perform a File upload and insertion of OBOE declaration and confirm the submission via the webform available [here](#).

3.2.3 End-to-End Testing

The main test environment is the Next EUA (formerly P-EUA). Customers have been able to test their end-to-end systems from trading through to clearing in the Next EUA environment from **24 August 2018**. As such, **access to EuroCCP in Euronext's test environment is also in Next EUA**.

End to end testing is strongly recommended prior to Go-Live . You can contact CTSG (CTSG@euronext.com) in case you need assistance in setting up scenarios for the tests and EuroCCP (clienttesting@euroccp.com) for post trade testing.

3.3 PRODUCTION ENVIRONMENT SET UP

The Production environment will be configured to allow Euronext Dublin instruments for trading from the migration Go Live date which is pending regulatory approval.

On the Production environment, customers are expected to (i) test connectivity to production, (ii) order new order entry sessions to access Production, and (iii) validate their access and software in mandatory Dress Rehearsals.

3.3.1 Ordering Order Entry Sessions to Access Production

All Trading Members using the new Optiq® OEG ME Cash trading are required to order their Optiq® Cash OE Sessions for Production prior to **16 January 2019 in order to validate their access to Order Entry Gateway in production on the last Dress Rehearsal day**. Please note that **Providers (ISVs, ASPs) do not have the ability to order OE Sessions on behalf of their clients**. Customers who have not ordered their OE sessions for Production are required to do so immediately.

Please be informed that no modifications or requests for new order entry sessions will be accepted after **19 January 2018** and before Go-Live. For any questions, please contact your CCC relationship manager.

The Order Forms are available online on the Euronext website at the following locations:

- Optiq® Cash Order Entry
 - [Logical access \(former SLE\) creation form](#)
 - [Logical access modification form](#)
 - [Logical access deletion form](#)
 - [Drop Copy creation form](#)
 - [Logical access form Free package](#)

- Optiq® Cash Order Entry (Liquidity Providers)
 - [Logical access creation LP form](#)
 - [Logical access LP temporary deactivation form](#)
 - [Logical access LP reactivation](#)

After receiving an order, logins will be communicated to customers by Customer Access Services. Customers are required to have tested their connectivity in Production before the mandatory Dress Rehearsals.

As a reminder:

- Providers cannot order Production OEG sessions, only EUA OEG sessions
- Trading members can only order Production OEG sessions themselves

- Sessions can only be ordered by a nominated Member Connectivity Administrator (MCA). Any customer without an MCA account should contact the Customer Access Services (CAS) team for more information at cas@euronext.com / Tel: +33 1 85 148 589

3.3.2 Direct network Connectivity for market data access

Customers who do not use an ISV or ASP and who would like to require direct connectivity can access Euronext's markets via the Secure Financial Transaction Infrastructure[®] (SFTI[®]).

For more information about SFTI or if you wish to obtain access to the Optiq[®] Order Entry Gateway or MDG channels via SFTI, please contact your sales representative at ICE Data Services or send an email to icglobalnetwork-info@theice.com.

Additionally, ICE Data Services might contact Members to arrange administrative and form-filling processes for the access to Optiq[®] JSE production.

Please note that access to EUA is already set up from an ICE Data Services standpoint.

3.3.3 Dress Rehearsals

Mandatory Dress Rehearsals will take place before Go Live, on **Saturday 15 December 2018** and **Saturday 19 January 2019**, allowing customers to test the target Production implementation of OEG, MDG and Saturn. **Customers must (i) validate their conformance test, (ii) confirm Telnet connectivity to Production and (iii) order their OE Sessions for Production to be authorized to take part in the Dress Rehearsal week-ends.**

Note that **clearing connectivity with Euro CCP is outside the scope** of the Dress Rehearsals.

3.3.3.1 Equities and ETF instruments migration Dress Rehearsals

The scope of the tests are the following:

- Optiq[®] Order Entry and Market data for Equities, ETF, Indices.
- DropCopy
- Saturn

Tests which are out of scope are the following:

- End of day files
- Functional high availability
- EuroCCP

Customers are expected to conduct the following tests:

- Secure network resources on the day of Dress Rehearsals to validate firewall / security path
- Connect to the Production environment
- Inject orders
- Purge the book at the end of the day and restore order book to Friday night
- Validate participation at the end of the day via a [web form](#)

All clients are required to participate to both dress rehearsals prior to Go Live. Participation in the migration week-end is highly recommended.

On the Saturday before go-live, clients will be asked to connect to the Optiq® OEG, as well as to the MDG multicast channels implemented in Production. Once the Go-Live is confirmed, clients will keep the configuration in place and will **not** perform a roll-back in order to begin trading using Optiq® OEG and MDG on the following Monday. Clients will need to ensure that they have purged their systems of the orders placed during the Saturday tests.

3.3.3.2 List of instruments available on Dress Rehearsal Days

On dress rehearsal days, Euronext will make a specific list of instruments and indices available for testing. This list is detailed in Appendix of this document.

3.3.4 Customer Readiness Checklist

The actions required of customers before the Go-Live of the Euronext Dublin Markets are described as following.

3.3.4.1 For Euronext Dublin members who do not already have an access to Optiq® and Saturn

	Members involved	Due date
Fill and Sign up AR, RP and MCA declaration forms Appoint key contacts	<i>All Trading Members</i>	31 October 2018
Sign up the Optiq® Trading Platform Access Agreement (TPAA)	<i>All Trading Members</i>	15 January 2019
Sign up Euronext Regulatory Reporting Solution Terms and Conditions	<i>All Trading Members</i>	15 January 2019
Order OE sessions Automatically provided for Next EUA; to be ordered for Production; required for Dress Rehearsals	<i>All Trading Members</i>	15 January 2019
Order Dublin Market Data channels Automatically provided for Next EUA; to be ordered for Production; required for Dress Rehearsals	<i>All Trading Members</i>	15 January 2019
Configure network Update connectivity and perform Telnet tests	<i>Trading Members, ASPs, ESPs and Market data Providers</i>	15 January 2019
Connectivity Test on Production order Entry Gateways	<i>Trading Members, ASPs</i>	15 January 2019
Validate conformance tests	<i>Trading Members, ASPs and Market Data Providers</i>	15 January 2019

Functional (prior to Dress Rehearsals) and technical (HA – prior to Go-lives) on all member codes, protocols with a CTSG analyst		
Participate in Dress Rehearsals Validate technical and functional access to Production	<i>Trading Members and Providers</i>	15 December 2018 and 19 January 2019
Test final set-up on the migration week-end Validate technical and functional access before the market segments migrate to Optiq® and Saturn platforms	<i>Trading Members and Providers</i>	2 February 2019, pending regulatory Approval

Note: Order Entry Sessions for Next EUA (formerly P-EUA) will be automatically provided to clients.

3.3.4.2 For Euronext Dublin members who already have an access to Optiq® and Saturn

	Members involved	Due date
Sign up Euronext Membership Extension Form	<i>All Trading Members</i>	15 January 2019
Order OE sessions* To be ordered for Production for cash and Equities segments; required for Dress Rehearsal	<i>All Trading Members</i>	15 January 2019
Order Dublin Market Data channels Automatically provided for Next EUA; to be ordered for Production; required for Dress Rehearsals	<i>All Trading Members</i>	15 January 2019
Validate light conformance tests Functional (prior to Dress Rehearsals) and technical (HA – prior to Go-lives) on all member codes, protocols and segments with an CTSG Analyst	<i>Trading Members, ASPs, and Market Data Providers</i>	15 January 2019
Participate in Dress Rehearsals Validate technical and functional access to Production	<i>Trading Members and Providers</i>	15 December 2018 and 19 January 2019
Test final set-up on the migration week-end Validate technical and functional access before the market segments migrate to Optiq® and Saturn platforms	<i>Trading Members and Providers</i>	2 February 2019, pending regulatory Approval

**Only Members without Order Entry sessions for Production for cash and Equities segments must order Order Entry sessions.*

Nota: Euronext Dublin members who already have an access to Optiq® and Saturn have Order Entry Sessions for Next EUA (formerly P-EUA) to be used for light conformance tests.

3.3.4.3 For current Euronext members who already have an access to Optiq® and Saturn but do not trade on Dublin Markets

Current Euronext members who already have an access to Optiq® and Saturn but do not trade on Dublin Markets yet and would like to start to trade on those markets on the migration Go Live date must complete a full membership extension process.

	Members involved	Due date
Sign up Euronext Membership Extension Form	<i>All Trading Members</i>	15 January 2019
Order OE sessions* To be ordered for Production for cash and Equities segments; required for Dress Rehearsals	<i>All Trading Members</i>	15 January 2019
Order Dublin Market Data channels Automatically provided for Next EUA; to be ordered for Production; required for Dress Rehearsals	<i>All Trading Members</i>	15 January 2019
Validate light conformance tests Functional (prior to Dress Rehearsals) and technical (HA – prior to Go-lives) on all member codes, protocols and segments with an CTSG Analyst	<i>Trading Members, ASPs, and Market Data Providers</i>	15 January 2019
Participate in Dress Rehearsals Validate technical and functional access to Production	<i>Trading Members and Providers</i>	15 December 2018 and 19 January 2019
Test final set-up on the migration week-end Validate technical and functional access before the market segments migrate to Optiq® and Saturn platforms	<i>Trading Members and Providers</i>	2 February 2019, pending regulatory Approval

*Only Members without Order Entry sessions for Production for cash and Equities segments must order Order Entry sessions.

Note: Euronext members who already have an access to Optiq® and Saturn already have Order Entry Sessions for Next EUA (formerly P-EUA) to be used for light conformance tests.

4. COMMUNICATION PLAN

Communication will continue throughout the Euronext Dublin Migration project, in order to ensure that all clients have access to clear and useful information for the duration of the project. The following list of communications will be sent to convey key details and clients should be sure to subscribe to any relevant distribution lists.

- **Info Flashes:** These communications will announce key milestones of the project, and details that all clients should be aware of, such as: documentation publication, the opening of each platform, and confirmed Production implementation dates.
- **Technical Documentation:** new and updated documentation will be provided throughout the course of the migration, and will provide clients with the required information to develop and implement Optiq® and Saturn OBOE features.

Note: to subscribe to any of the aforementioned communications, please contact optiq@euronext.com or Client Coverage Center (CCC) at +353 1 6175144.

5. DOCUMENTATION OVERVIEW

This section outlines the various documents that are now available to clients on the Euronext Optiq® website. Please refer to the version of the documents indicated or following versions.

■ Saturn Specifications and background documentation

- Euronext Global Reporting Solution - Saturn Interface User Guide v2.3
- Saturn Web Services Specifications– v2.8.7
- OBOE – Euronext Off-Book On-Exchange trades publication - Market Model overview – version 1.3
- Saturn example of OBOE upload file

■ Optiq® OEG Technical Documentation

- Euronext Cash Markets – Optiq® OEG Client Specifications - SBE Interface – v1.3.1
- Euronext Cash Markets – Optiq® OEG Client Specifications - FIX 5.0 Interface - v1.3.2
- Euronext Cash Markets – Optiq® & TCS Error List – v1.3.1
- Euronext Cash Markets – Optiq® Kinematics Specifications – v1.3.1
- Euronext Cash Markets - Optiq® Drop Copy Service V1.1.0

■ MDG Technical Documentation

- Euronext Cash Market – Optiq® MDG Client Specifications - v2.1.4
- Euronext Cash and Derivatives Markets – Optiq® File Specifications – v2.0.2
- Euronext Optiq® Market Data Gateway Production Environment v1.9 (Future version)
- Euronext Optiq® Market Data Gateway External User acceptance Environment v1.8 (Future version)

Clients are advised to also refer to the Euronext Rules and Regulations documents for more details. For the latest version of documentation please visit <http://www.euronext.com/optiq/documentation>

6. SUPPORT

Find below the contact details of Euronext's and partner support teams:

Team	Contact details
Membership For questions related to the TPAA	<ul style="list-style-type: none"> ■ Tel: +31 20 721 4264 / +33 (0)1 70 48 2505 ■ Email: EuronextMembership@euronext.com
Customer Access Services For questions related to access and log-in credentials to Optiq® OEG	<ul style="list-style-type: none"> ■ Tel: +33 1 85 14 85 89 ■ Email: CAS@euronext.com
Customer Technical Support Group Helpdesk For technical support throughout the testing period	<ul style="list-style-type: none"> ■ Tel: +33 (0)1 8514 8588 ■ Email: CTSG@euronext.com
ICE Data Services For SFTI connection	<ul style="list-style-type: none"> ■ Email: icglobalnetwork-info@theice.com
Euronext Market Services For real time member support and queries	<ul style="list-style-type: none"> ■ Tel France: +33 1 8514 8585 ■ Tel The Netherlands: +31 20 721 9585 ■ Tel UK: +44 20 7660 8585 ■ Tel Belgium: +32 2 620 0585 ■ Tel Portugal: +351 2 1060 8585 ■ Tel Ireland: +33 1 8514 8585 ■ Email: EMSEquities@euronext.com
EUROCCP Relationship Management Team	<ul style="list-style-type: none"> ■ Tel: 0207 392 7480 ■ Email: rm@euroccp.com
EUROCCP Client Service Team For onboarding and testing requirements	<ul style="list-style-type: none"> ■ Tel : 0207 392 7490 ■ Email : clientservices@euroccp.com

7. APPENDIX

7.1 LIST OF TRADING GROUPS THAT WILL MIGRATE TO OPTIQ®

The following trading groups are included in the scope of migration of ETFs and Equities to Optiq®:

Gr.	Market	Nature	Class name	Optiq® Segment
9A	Dublin	Equities	ISEQ 20 - XMSM	Equities
9B	Dublin	Equities	ISEQ 20 - XESM	Equities
9C	Dublin	Equities	SHARES - XMSM	Equities
9D	Dublin	Equities	SHARES - XESM	Equities
9E	Dublin	ETFs	ETFs CONTINUOUS - XMSM	Funds
9F	Dublin	Equities	ANCILLARY SHARES - XMSM	Equities
9G	Dublin	Equities	ANCILLARY SHARES - XESM	Equities

Note: above list of trading groups will be available in Next EUA (formerly P-EUA) and Production environments.

7.2 LIST OF EQUITIES AND ETF INSTRUMENTS IN NEXT EUA AND PRODUCTION ENVIRONMENTS

Find below the list of Equities and ETF instruments (57 Equities and 1 ETF) that will be in place for Dublin market migration to Optiq®. Please note that the allocation of instruments among partitions is likely to change in the future with load balancing requirements. Once the load balancing is active, the allocation of instruments can be found in the standing data files and standing data real time messages. Information regarding repartition of instruments can also be retrieved through OEG using the Instrument Synchronization List (50) message.

Note that we have set up 1 ETF instrument on Next EUA (formerly P-EUA) and Production environment.

ISIN Code	Symbol Index in Next EUA	Symbol Index in production	Trading group	MIC	Trading code
IE00BVF1H83	1275871	0001597885	9E	XMSM	IE00BVF1H83

Please note that only instruments with a Symbol Index and trading Group defined will be available for testing on the Next EUA (formerly P-EUA) platform. All the following instruments will be made available in Production Environment with different Symbol Index to be communicated in due course.

ISIN Code	Symbol Index in Next EUA	Symbol Index in production	Trading group	Trading code	Mnemonic Code	MIC Code
IE00BD9PKV79	To be confirmed	0001597035	9D	IE00BD9PKV79	SCC	XESM
CA3060711015	1268538	0001596991	9D	CA3060711015	FAC	XESM
CH0043238366	1268976	0001597038	9A	CH0043238366	YZA	XMSM
GB0001500809	1268977	0001597025	9C	GB0001500809	TQW	XMSM
GB0002374006	1274705	0001597013	9C	NSCIE00GUI15	GUI1	XMSM
GB0008847096	1268978	0001596983	9C	GB0008847096	TCO	XMSM
GB0031477770	1273445	0001597026	9D	GB0031477770	GYQ	XESM
GB00B9275X97	1273444	0001597877	9D	GB00B9275X97	CRO	XESM
GB00BDD1LS57	1273443	0001597014	9D	GB00BDD1LS57	AYP	XESM
GB00BGCC6189	1273442	0001597005	9D	GB00BGCC6189	GAME	XESM
GB00BY7QYJ50	1273441	0001597006	9D	GB00BY7QYJ50	GRW	XESM

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GB00BYYN4225	1268539	0001597004	9C	GB00BYYN4225	HSW	XMSM
IE0000020408	1273440	0001597003	9D	IE0000020408	DOY	XESM
IE0000527006	1273439	0001597032	9C	IE0000527006	DLE	XMSM
IE0000669501	1268981	0001597008	9A	IE0000669501	GL9	XMSM
IE0000730790	1273438	0001597001	9C	IE0000730790	DD7E	XMSM
IE0000730808	1273437	0001597010	9C	IE0000730808	DD7D	XMSM
IE0001827041	1268979	0001596995	9A	IE0001827041	CRG	XMSM
IE0001827264	1273436	0001597042	9C	IE0001827264	DD8A	XMSM
IE0001827603	1273435	0001597000	9C	IE0001827603	DD8B	XMSM
IE0002325243	1273434	0001597020	9C	IE0002325243	IJG	XMSM
IE0003073255	1273433	0001597878	9C	IE0003073255	DOP	XMSM
IE0003290289	1268982	0001596993	9C	IE0003290289	EG7	XMSM
IE0004906560	1268983	0001597007	9A	IE0004906560	KRZ	XMSM
IE0004927939	1268984	0001596984	9A	IE0004927939	KRX	XMSM
IE0007214426	1273432	0001597036	9D	IE0007214426	DQ5	XESM
IE00B010DT83	1268985	0001597012	9A	IE00B010DT83	GCC	XMSM
IE00B0Q82B24	1273431	0001597017	9D	IE00B0Q82B24	P8ET	XESM
IE00B1FR8863	1273430	0001597043	9D	IE00B1FR8863	8GW	XESM
IE00B1HDWM43	1268986	0001597015	9B	IE00B1HDWM43	T7O	XESM
IE00B1RR8406	1268987	0001597034	9A	IE00B1RR8406	SK3	XMSM
IE00B1WV4493	1268988	0001597011	9B	IE00B1WV4493	OIZ	XESM
IE00B4XVDC01	1273428	0001597002	9D	IE00B4XVDC01	OVXA	XESM
IE00B59HWP19	1268989	0001597028	9C	IE00B59HWP19	IPDC	XMSM
IE00B66B5T26	1273427	0001596986	9D	IE00B66B5T26	PZQA	XESM
IE00BBR67J55	1268990	0001597030	9A	IE00BBR67J55	GN1	XMSM
IE00BD1RP616	1268991	0001597033	9A	IE00BD1RP616	BIRG	XMSM
IE00BD64C665	1273426	0001597040	9D	IE00BD64C665	MIO	XESM
IE00BD6JX574	1273425	0001596998	9A	IE00BD6JX574	GVR	XMSM
IE00BD97C178	1273424	0001596999	9D	IE00BD97C178	DQ7A	XESM
IE00BDC5DG00	1273423	0001597044	9C	IE00BDC5DG00	JEVA	XMSM
IE00BDT5KP12	1273422	0001597029	9D	IE00BDT5KP12	YEW	XESM
IE00BFOL3536	1273421	0001597031	9C	IE00BFOL3536	A5G	XMSM
IE00BF0MZFO4	1273420	0001596988	9D	IE00BF0MZFO4	ORQ1	XESM
IE00BF2NR112	1273419	0001597037	9D	IE00BF2NR112	GRP	XESM
IE00BG0HDR01	1273446	0001596987	9D	IE00BG0HDR01	6VR	XESM
IE00BGHQ1986	1268992	0001596992	9A	IE00BGHQ1986	HBRN	XMSM
IE00BJ34P519	1273448	0001597027	9A	IE00BJ34P519	IRES	XMSM
IE00BJMZDW83	1268993	0001596985	9A	IE00BJMZDW83	DHG	XMSM
IE00BJYS1G50	1274706	0001597024	9D	NSCIE0MSTY18	MSTY1	XESM
IE00BLP58571	1268994	0001597041	9A	IE00BLP58571	IR5B	XMSM
IE00BVG3741	1273418	0001596989	9D	IE00BVG3741	MLC	XESM
IE00BWB8X525	1268995	0001596990	9C	IE00BWB8X525	ILOA	XMSM
IE00BWT6H894	1268996	0001597016	9A	IE00BWT6H894	PPB	XMSM
IE00BWW4ZF18	1273417	0001597018	9A	IE00BWW4ZF18	C5H	XMSM
IE00BXC8D038	1273416	0001597039	9D	IE00BXC8D038	APGN	XESM

IE00BYTBXV33	1268980	0001597019	9A	IE00BYTBXV33	RY4C	XMSM
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The following list of instruments have been created in production environment only and will be visible in the standing data files for Equities and Funds segments as well as in the dedicated Dublin market data channels. Clients are informed that these dummy instruments will remain halted and will never be available for trading in Production during market hours. These instruments will be tradable during the first Dress Rehearsal only and will be removed and not replaced from production on the 19 January 2019.

ISIN	Mnemonic Code	Name	Trading Group
NSC100000007	DUB01	DUBLIN TEST 1	9A
NSC100000015	DUB02	DUBLIN TEST 2	9A
NSC100000023	DUB03	DUBLIN TEST 3	9A
NSC100000031	DUB04	DUBLIN TEST 4	9B
NSC100000049	DUB05	DUBLIN TEST 5	9B
NSC100000056	DUB06	DUBLIN TEST 6	9B
NSC100000064	DUB07	DUBLIN TEST 7	9C
NSC100000072	DUB08	DUBLIN TEST 8	9C
NSC100000080	DUB09	DUBLIN TEST 9	9D
NSC100000098	DUB10	DUBLIN TEST 10	9D
NSC100000106	DUB11	DUBLIN TEST 11	9F
NSC100000114	DUB12	DUBLIN TEST 12	9G
NSC100000122	DUB13	DUBLIN TEST 13	9E
NSC100000130	DUB14	DUBLIN TEST 14	9E

7.3 LIST OF INDICES

The Dublin indices in scope will be renamed as follows:

ISIN Code	Current name	New official name	Mnemo
IE0001477250	ISEQ® Overall	ISEQ® All-Share	ISEQ
IE0000506851	ISEQ® Overall Return	ISEQ® All-Share GR	ISEQG
IE0000516009	ISEQ® Financial	ISEQ® Financials	ISEFI
IE0000511505	ISEQ® Financial Return	ISEQ® Financials GR	ISEFG
IE0000506299	ISEQ® Small Cap	ISEQ® Small	ISESM
IE0000506745	ISEQ® Small Cap Return	ISEQ® Small GR	ISESG
IE00B2QF5299*	ISEQ® ESM Index*	ISEQ® ESM*	IESM*
IE00B2QF5307*	ISEQ® ESM Index Return*	ISEQ® ESM GR*	IESMG*
IE00B0500264	ISEQ® 20 Index	ISEQ® 20	ISE20
IE00B0500488	ISEQ® 20 Index Return	ISEQ® 20 GR	ISE2G
IE00B2QF4Y48	ISEQ® 20 Leveraged	ISEQ® 20 Leverage	ISELV
IE00B2QF4Z54	ISEQ® 20 Capped	ISEQ® 20 Capped	ISECA
IE00B2QF5075	ISEQ® 20 Capped Return	ISEQ® 20 Capped GR	ISECG

* ISEQ® ESM Index and ISEQ® ESM Index Return will be discontinued at the migration date. Those indices will remain available in Next EUA environment but will not be available in Production environment for Dress rehearsals and Go Live dates.

7.4 LIST OF SUMMARY OF CHANGES

REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
1.0	3 Aug 2018	Euronext	First release
1.1	27 Aug 2018	Euronext	First release
1.2	27 Sep 2018	Euronext	Timeline update
1.3	9 November 2018	Euronext	Configuration details update
1.4	11 December 2018	Euronext	Configuration details update
1.5	11 January 2019	Euronext	Configuration details update

Version	Change Description
1.0	First release
1.1	Instruments list has been updated
1.2	Dates of different milestones have been changed, instruments list has been updated
1.3	Configuration details have been added, instruments list has been updated
1.4	Configuration details have been updated
1.5	Configuration details have been updated