

Borsa Italiana Optiq Migration

Deep dive on Warrants & Certificates
(Phase 2)



FUNCTIONAL USER GROUP

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Speakers



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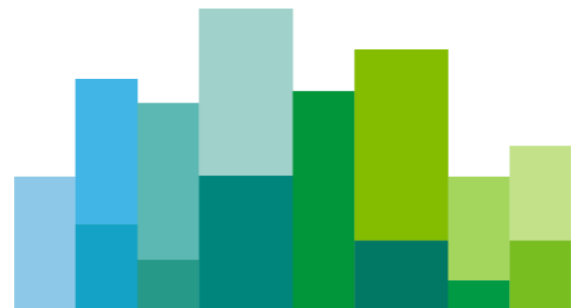
Agenda

- 1. Context reminder**
- 2. Trading Hours**
- 3. Trading methods and phases**
- 4. Order types and controls**
- 5. Bid-Only Liquidity Provider**
- 6. Liquidity Provision**
- 7. Migration Phase 2 operational/technical insights**
- 8. Q&A**

Session's objectives:

- Provide an overview of the future W&C model
- Detail some new critical functionalities that will be made available to Italian customers
- Enable dialogue with customers on the changes related to the W&C model within Euronext

1. CONTEXT REMINDER



Context reminder

Following Euronext's acquisition of Borsa Italiana in April 2021, Borsa Italiana's trading systems **are migrating from the Millennium Exchange and SOLA systems to the Euronext Optiq® platform**. The migration of Borsa Italiana to Optiq will allow its trading participants to **benefit from existing features provided by the platform through improved connectivity and backward/forward compatible protocols, and an optimised messaging model**

Migration timeline as currently anticipated

Phases



Countdown to Warrants & Certificates migration is on.

Functional and technical deliveries have started and client readiness activities are ongoing

- For our clients to experience a smooth migration of Borsa Italiana Markets onto Euronext systems according to the anticipated timeline, we kindly **encourage them to secure time, resources and budgets in 2023 and 2024**. We are conscious of the efforts required from our clients and thank you in advance
- Technical resources and capabilities will be required to configure and prepare systems to migrate and update connectivity links (for Italian and other Euronext markets)
- MTS is not in scope for the migration**

Overview of the major changes on Securitised Derivatives Markets

**SeDeX &
Cert-X**

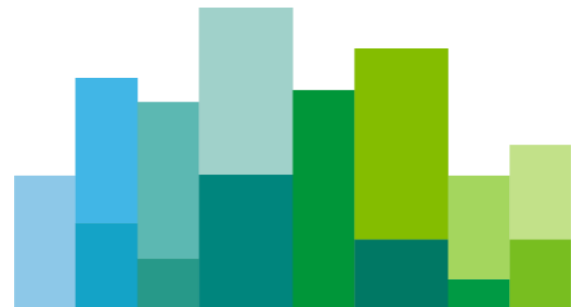


1. REQUEST FOR EXECUTION (RFE)
MARKET MODEL

2. EXTENDED TRADING HOURS

3. INCREASE THE CENTRAL ROLE OF
THE LP

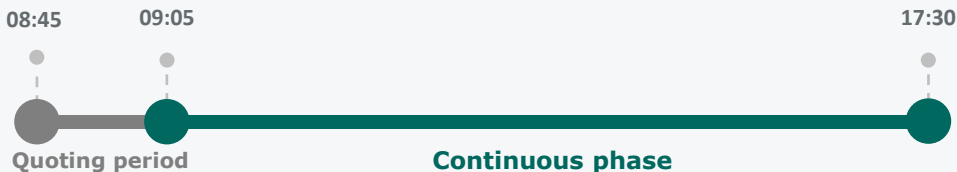
2. TRADING HOURS



Trading hours changes

Current Functioning

SeDeX & Cert-X



After Migration

ETH on SeDeX only



* The **CALL PHASE** starts at 07:30 and ends when the market opens: 08:00 or 09:05 depending on what time the instrument starts trading

Market participants can set a time validity to the orders submitted by their clients coincident with one of the trading sessions closing time

Cert-X No change expected on Cert-X markets remaining on 9:05 – 17:30

Activation of extended trading hours

- ① On Go-Live date **all instruments will be associated to standard hours**: 9:05 – 17:30
- ② Post-go live, Extended Trading Hours services **will gradually be available to the W&C Italian markets** in order to allow a stabilisation period and smooth ramp-up for clients (length of this transition will be communicated in due course)
- ③ Publication of a **BITA public announcement** to activate Extended Trading Hours with 15 days notice
- ④ After which, **issuers can list new instruments or request to extend trading of existing products** until the desired extended hour

3. TRADING METHODS AND PHASES



Trading methods and phases

Trading is organised with the following phases:



Period when orders and quotes are accumulated but matching does not occur

Period that starts at the end of the Call phase

Period during which orders and quotes are submitted and typically matched continuously

Period when orders and quotes are accumulated but matching does not occur

Period that starts at the end of the Reservation phase

Period that starts at the end of the Continuous Trading with RFE

Period that starts at the end of the Closed phase

Orders can be:

Inserted



Modified



Cancelled



Trading methods and phases

Trading is organised in the following phases:

1 Call (Pre-Opening) Phase

Order & quote accumulation period, during which Optiq® records all orders and quotes entered but matching does not occur

During this phase:

The **Bid and Offer quotes** of the LP are **broadcast to the market** via the MarketUpdate message

The **Bid and Offer orders** of other market participants are broadcast to the market via the MarketUpdate message

No matching of orders and/or quotes is possible during this phase

2 Call Phase Continuous Uncrossing

At the opening, 2 cases could occur:

LP Presence in the order book?

YES

NO

The system attempts to process possible matches according to the RFE logic setup

Instrument is automatically reserved

Move to Continuous Phase

RFE MODEL in BRIEF

SeDeX & Cert-X will benefit from Request For Execution (RFE) model which is already active on Euronext markets:

3

FUNCTIONING

When 2 orders matches, a Request For Execution (RFE) message is sent to the LP

- Within a pre-determined time the execution is blocked and the LP can insert the updated prices.
- When the LP replies to the RFE message, the matching occurs based on time-price priority.

RFE msg

RFE Duration

RFE 1



0.6 seconds

RFE 2



3 seconds

NO RFE



-

ADVANTAGES

Thanks to RFE mechanism, to the benefit of investors:

- LPs are protected against latency arbitrage: no need to reduce liquidity;
- Issuers are in the ideal environment to widen their offer of traded instruments.

RFE MESSAGE

The RFE message is fully anonymous.

Information on the counterparty, the side, the price, the size are not disseminated to the LP.

Trading methods and phases

4

Reservation phase

An automated temporary interruption of trading (matching) of an instrument triggered by an intraday event

- On the RFE market model, such Reservation Phase most often occurs **when the LP is out of one or both sides of the orderbook**
- A Reservation phase could also be triggered by **the Matching Engine during a Bid-Only Period**, if a possible match could take place above the Virtual Offer Price
- During a Reservation phase there is **no order matching**, but order entry is fully functional

5

Reservation phase continuous uncrossing

- Once the condition which triggered the Reservation phase is resolved, trading (matching) resume automatically
- The reopening process follows the same mechanism as the Continuous Uncrossing following the Call phase
- The system attempts to process possible matches according to the RFE logic setup, and then proceeds into the Continuous phase

Trading methods and phases

6

Closed

The Closed phase is a short phase which concludes the end of the trading day (starting at 17:30, 20:30 or 22:00 on SeDeX for example)

- It follows the Continuous phase, or a Reservation phase if an instrument was reserved before the end of the trading day
- During the Closed phase, **market participants are allowed to cancel the orders they may already have in the order books**, but the **modification of existing orders or entry of new orders is not possible**

7

Inaccessible

The Inaccessible phase is the last phase of the day

- During the Inaccessible phase, **order entry is closed**, i.e. entry of new orders, modification or cancellation of existing orders is not possible
- **Order entry will resume on the next exchange day** during the Call phase

Trading methods and phases

PHASES

CALL PHASE

CONTINUOUS TRADING with RFE

CONTINUOUS TRADING without RFE

RESERVATION PHASE

DURING RFE TIME DELAY

PRICE COLLAR SUSPENSION for VOP

Orders & Quotes

Orders & quotes are accumulated on the book and visible

LP posts indicative quotes on the book, participants insert passive orders

LP posts firm quotes on the book, participants insert aggressive or passive orders

Orders only are accumulated on the book and visible

Orders only are accumulated on the book and invisible

Orders and bid-quotes are accumulated on the book and visible

Trading

Book uncrossing at the opening if LP is present

LP quotes can trade against passive orders

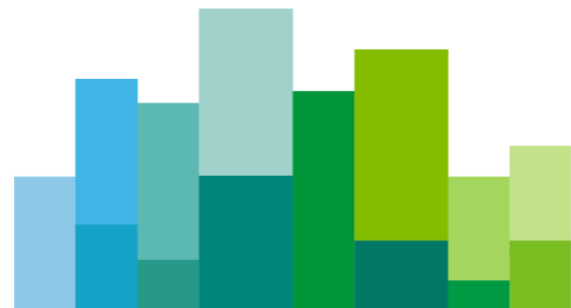
All trades get executed

Book uncrossing when LP enters quotes

Book uncrossing when LP refreshes quotes or when time delay expires

Every 30 seconds the system checks if there is a matching possibility

4. ORDER TYPES AND CONTROLS



Orders types

The following types of orders may be entered:

	Call	Continuous	ETH
LIMIT ORDERS	✓	✓	✓
MARKET ORDERS	✓	✓	✓
STOP-ON-QUOTE ORDERS	✓	✓	✓
STOP-ON-QUOTE LIMIT ORDERS	✓	✓	✓
ICEBERG ORDERS	✓	✓	✓



New















Not available



Available

Orders validity

Non-Liquidity Provider orders can be assigned the following conditions:

	Call	Continuous	ETH
DAY			
GOOD TILL DAY (GTD) <i>max duration of 365 days</i>			
GOOD TILL CANCELLED (GTC)			
IMMEDIATE OR CANCEL (IOC) *			



New



Not available



Available

Controls on orders

1 MINIMUM TICK

The prices of orders may be multiples of the ticks established for each financial instrument in relation to the prices of the orders entered, as follows:

Table currently in place on Cert-X market which will be extended to SeDeX	Price of the order entered (euro and other currencies) *	Tick
	Less than 0.0030	0.0001
0.0030 - 0.3000	0.0005	
0.3000 - 1.5000	0.0010	
1.5000 - 3.0000	0.0050	
Equal to or more than 3.0000	0.0100	

Considering the characteristics of the financial instruments, Borsa Italiana may establish a different tick informing the market with a notice

2 PRICE BANDS

- Orders are **checked upon entry vs the Price Bands % a +/- X%** indicated in the Guide to the Parameters
- In case orders fall outside the price bands, they are rejected to prevent insertion of aberrant orders

3 MINIMUM LOT

- Orders are **checked upon entry to make sure the quantity is a multiple** of the minimum trading lot

Price bands

X PARAMETER: check on prices upon entry

X parameter for all
instruments, excluded
Constant Leverage
Certificates

Static Reference Price	X parameter (OLD)	X parameter (NEW)
Less than or equal to 0.003	±2000%	±2000%
0.0031 – 0.03	±600%	±600%
0.0301 – 0.1	±400%	±400%
0.1001 – 0.3	±300%	±300%
0.3001 - 1,5	±300%	±300%
1.5001 – 3	±200%	±200%
3.0001 – 30	±90%	±90%
30.0001 – 70	±50%	±50%
70.0001 – 100	±30%	±40%
100.0001 – 300	±25%	±30%
NEW 300.0001 - 1000	±20%	±25%
NEW 1000.0001 - 10000	±20%	±25%
Above 10000	±20%	±20%

Price Bands for Constant Leverage Certificates

Underlying type	Static Reference Price	X parameter	X parameter	X parameter
		(Leverage 1,2,3)	(Leverage 4,5)	(Leverage 6,7)
Commodities	Less than or equal to 0.01	180%	240%	300%
	0.01 – 0.05	120%	160%	200%
	Above 0.05	60%	80%	100%
Volatility indices	Less than or equal to 0.01	300%	300%	-
	0.01 – 0.05	200%	200%	-
	Above 0.05	100%	100%	-
Bonds and FX rates	Less than or equal to 0.01	90%	120%	150%
	0.01 – 0.05	60%	80%	100%
	Above 0.05	30%	40%	50%
Equities	Less than or equal to 0.01	240%	300%	300%
	0.01 – 0.05	160%	200%	200%
	Above 0.05	80%	100%	100%
Other underlyings	Less than or equal to 0.01	180%	240%	300%
	0.01 – 0.05	120%	160%	200%
	Above 0.05	60%	80%	100%

Limits to the quantity and countervalue of orders

- The maximum quantity of a single order is equal to **50,000,000**
- The maximum countervalue of a single order is equal to **25,000,000 euro**

Maximum quantity of the orders (number of instruments)	Maximum countervalue of the orders (euro)
50,000,000	25,000,000

➔ For instruments traded in currencies other than the euro, the limits are periodically adjusted on the basis of the exchange rate

- **ICEBERG ORDERS** have specific limits for the peak and the total volume

- **iceberg orders** are buy or sell orders that are split into smaller orders (peak), so as not to show the entire quantity of the order on the market (total volume)
-
- when an iceberg order is executed for its disclosed quantity (the "peak"), that quantity is renewed
-
- for the execution of one entering opposite-side order, the displayed quantities of all orders at the same price first are executed on time priority and secondly the remaining iceberg orders are executed for their total amount according time priority

Disclosed quantity (peak)	Total volume
<ul style="list-style-type: none">• must be a multiple of the lot size• minimum 10 times the lot size	<ul style="list-style-type: none">• minimum countervalue equals to 10,000 EUR

TCS (Trading Confirmation System)

Off book pre-arranged LIS trades

Feature overview:

- it allows to execute off book but on Exchange pre-arranged trades
- the order is executed only between the two parties involved
- the transaction takes place outside the book and therefore does not affect the market price

➔ Below are the limits to the minimum countervalue and the range within which the price can fluctuate:

Countervalue
<ul style="list-style-type: none">• Minimum value equals to 60,000 EUR

Price
<ul style="list-style-type: none">• $\pm 25\%$ compared to the price of the last transaction

5. BID-ONLY LIQUIDITY PROVIDER



Instruments in bid-only

- 1 LPs can switch to bid-only via LP Command* in real-time autonomously
- 2 LPs can revert back to bid&ask by sending double quotes
- 3 Bid-only status is notified via MDG **Trading Side** field (Bid Only or Both sides)
- 4 **Important:** if the bid quote is cancelled or the offer quote is cancelled without sending the switch to bid-only command, trading is reserved;
- 5 In bid-only products, trading occurs in the range between the bid quote and the Virtual Offer Price (VOP)
- 6 VOP values are established in the Guide to the parameters
- 7 VOP are disseminated real time alongside LP quotes via MDG as **Low LP Collar** and **High LP Collar**

* LP Action Code among SBE messages

Virtual offer price table

Virtual offer price: if the liquidity provider is in BID-ONLY, the max offer price is determined as a function of the bid price (b)

Bid price (b) of the liquidity provider	Upper price limit for the execution of trades <i>(b + price difference expressed in trading currency)</i>	Bid price (b) of the liquidity provider	Upper price limit for the execution of trades <i>(b + price difference expressed in trading currency)</i>
$b < 0.003$	$b + 0.005$	$30.0001 \leq b < 70.00$	$b + 4$
$0.003 \leq b < 0.03$	$b + 0.02$	$70.0001 \leq b < 90.00$	$b + 7$
$0.0301 \leq b < 0.1$	$b + 0.04$	$90.0001 \leq b < 110.00$	$b + 9$
$0.1 \leq b < 0.2$	$b + 0.05$	$110.0001 \leq b < 200.00$	$b + 10$
$0.2 \leq b < 0.3$	$b + 0.07$	$200.0001 \leq b < 300.00$	$b + 17.5$
$0.3 \leq b < 0.75$	$b + 0.1$	$300.0001 \leq b < 500.00$	$b + 20$
$0.75 \leq b < 1.5$	$b + 0.2$	$500.001 \leq b < 1000.00$	$b + 30$
$1.5 \leq b < 3.00$	$b + 0.3$	$1000.001 \leq b < 5000.00$	$b + 50$
$3 \leq b < 5$	$b + 0.5$	$5000.0001 \leq b < 10000.00$	$b + 100$
$5 \leq b < 10.00$	$b + 0.8$	$10000.0001 \leq b < 50000.00$	$b + 200$
$10.0001 \leq b < 30.00$	$b + 1.5$	$b \geq 50000$	$b + 500$

Trading Suspension due to VOP Collar

1

The LP is quoting 75 and 77. When the LP switches to bid-only, the system automatically calculates the new Virtual Offer Price as bid + 7

Bid price (b) of the liquidity provider	Upper price limit for the execution of trades (b + price difference expressed in trading currency)
$30.0001 \leq b < 70.00$	b + 4
$70.0001 \leq b < 90.00$	b + 7
$90.0001 \leq b < 110.00$	b + 9



2

If two orders potentially match at 85 (above the VOP) a reservation phase is triggered, orders are not cancelled, and the system tries to match again at regular intervals (every 30 seconds)

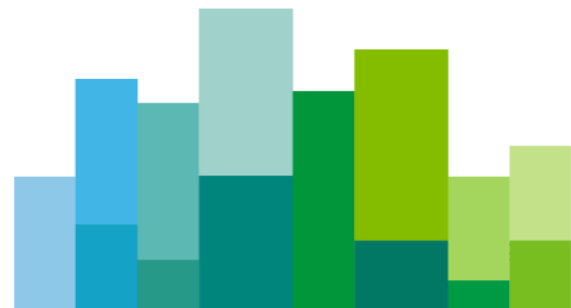


3

When the BID (b) price increases (from 75 to 78.5), the virtual offer price is automatically updated, and if the orders are now within the new range, the trade is executed



6. LIQUIDITY PROVISION



Liquidity Provider, Secondary Liquidity Provider And Market Maker

The operators providing liquidity for SeDex and Cert-X markets will be the following:

Liquidity Provider

The one and only official LP, replacing the current Specialist, benefits of a series of dedicated functionalities (RFE msg, bulk quotes, bid-only switch, KOBİ, KIBI, PAKO)

Secondary Liquidity Provider

Additional LP acting with the consent of the issuer in bid&ask or, if needed, just in bid-only

Market Maker (SeDeX only)

MiFID II market maker acting without the consent of the issuer in bid&ask

Liquidity Provider, Secondary Liquidity Provider And Market Maker

A comparison between the subjects:

	Liquidity Provider	Secondary Liquidity Provider	Market Maker (SeDeX only)
Is a Mandatory or Voluntary subject	Mandatory	Voluntary	Voluntary
Act with Issuer consent	✓	✓	✗
Provide liquidity through	Bulk quotes	Orders	Orders
How many subjects can there be	Only one per ISIN	One or more per ISIN	One or more per ISIN
Can operate in Bid & Ask	✓	✓	✓
Can operate in Bid-Only	✓	✓	✗
Minimum time quoting obligations	80%	50%	50%
Book reservation, RFE msg, bid-only, BOBBB, KOBİ, KIBI, PAKO	✓	✗	✗

Obligations of Liquidity Providers, Secondary Liquidity Providers and Market Makers

Quotation obligations of liquidity providers, secondary liquidity providers and market makers vary according to the trading hours:

Trading Hours	Market	Minimum amount (EUR)	Quantity Cap	Maximum spread (%)	Minimum time presence % (Liquidity Provider)	Minimum time presence % (Secondary Liquidity Provider)	Minimum time presence % (Market Maker, only on SeDeX market)
8:00 - 09:05	SeDeX	2,500	20,000	Maximum spread 2	80% (bid-ask, bid-only, LPU)	50% (bid-ask SLM , bid-only LPS)	50% (bid-ask MMA)
09:05 - 17:30	SeDeX and Cert-X	5,000	20,000	Maximum spread 1			
17:30 - 22:00	SeDeX	2,500	20,000	Maximum spread 2			

Obligations of Liquidity Providers, Secondary Liquidity Providers and Market Makers

Percentage values of maximum spreads:

Previous closing price (EUR)	Maximum spread 1	Maximum spread 2
Less than or equal to 0.003	200%	270%
0.0031 – 0.3	60%	75%
0.3001 – 1.5	25%	30%
1.5001 – 3	17.5%	25%
3.0001 – 30	7.5%	10%
Above 30	3.5%	5%

During stressed market conditions on SeDeX market:

- Liquidity Providers, Secondary Liquidity Providers and Market Makers are required to quote with halved quantities and with doubled spreads
- Liquidity Providers with bid-only obligations are required to quote with halved quantities

Such stress conditions occur in the following circumstances:



Instruments on underlying shares traded on the Euronext Milan market	Instruments on Italian stock indices
<ul style="list-style-type: none"> • During the 15 minutes of continuous trading following a volatility interruption of the underlying shares • in cases where stressed market conditions on the underlying have been declared 	<ul style="list-style-type: none"> • In cases where stressed market conditions on index derivatives traded on the IDEM market have been declared

Functionalities reserved to liquidity providers

Some features are available for Liquidity Providers only:

Bulk Quotes

KIBI

KOBI

PAKO

BO & BOBBB

*Knock-In
By Issuer*

*Knock-Out
By Issuer*

*Payment After
Knock-Out*

*Bid-Only
& Bid-Only Before
Buy-Back*



To optimise
bandwidth usage



To replicate
intraday listing



To suspend trading
in real time
following a knock-
out event



To facilitate
intraday residual
value payment



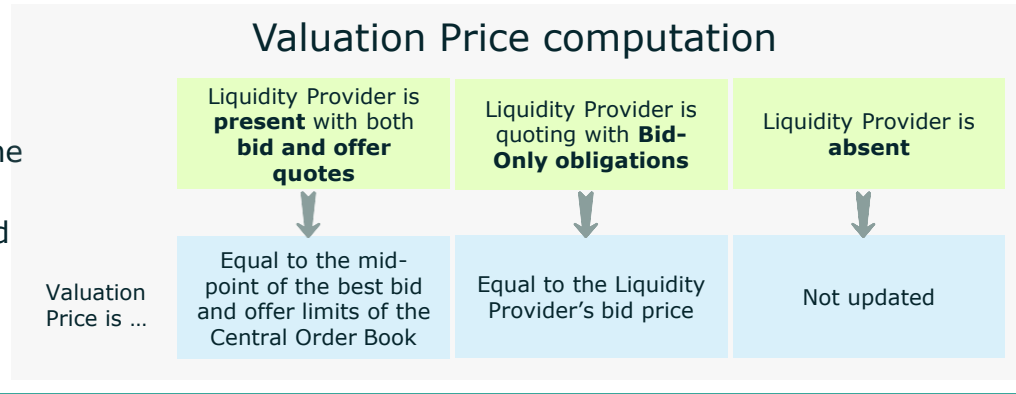
To manage sold-out
instruments or
instruments about to
be delisted

Valuation Price and Closing Price



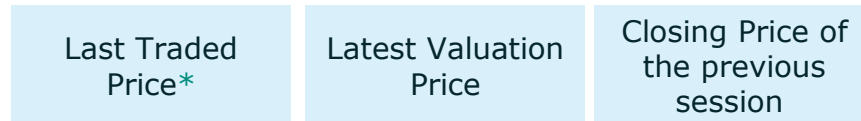
Valuation Price

- The current static and dynamic prices have been replaced by the Valuation Price
- Valuation Price is calculated and disseminated **at the opening and every 5 minutes**



Closing Price

- The current reference price is replaced by the Closing Price.
- The Closing Price is equal to the latest between:




* The Last Traded Price is the price of the latest trade

7. OPTIQ MIGRATION PHASE 2 OPERATIONAL & TECHNICAL INSIGHTS



Segments, Partitions and Logical Accesses

CASH SEGMENTS	Equities	Fixed Income	ETFs & Funds
	Warrants & certificates	Euronext Block (MTF)	
DERIVATIVES SEGMENTS	Equity Derivatives	Index Derivatives	Commodity Derivatives
PUBLICATION SEGMENTS	Indices	APA	
	Euronext FX	Irish Bonds & Funds	

SeDeX & Cert-X 

GUIDELINES

- **SeDeX** and **Cert-X** (EuroTLX) will be added to the **Warrants & Certificates (W&C)** segment
- The **W&C** segment is composed of **2 partitions**
- Common clients can use the same **Logical Accesses** they use for other **W&Cs** traded on Optiq
- Clients can use the same **Firm ID(s)** they use for other markets traded on Optiq
- Use of dedicated **Logical Accesses** for LP activity is **suggested** but not mandatory
- **Account Types:**
 - **Primary Liquidity Providers** should mark orders with **Account Type "LP" (6)**
 - **Secondary Liquidity Providers** should mark orders with **Account Type "Structured Product Market Maker" (8)**
 - Brokers/Dealers should mark orders with **Account Type "House" (2)/"Client" (1)**

Testing now available in EUA for Italian W&Cs



Since 19 April 2023, Borsa Italiana Phase 2 subset of instruments is available in Optiq Next EUA for testing:

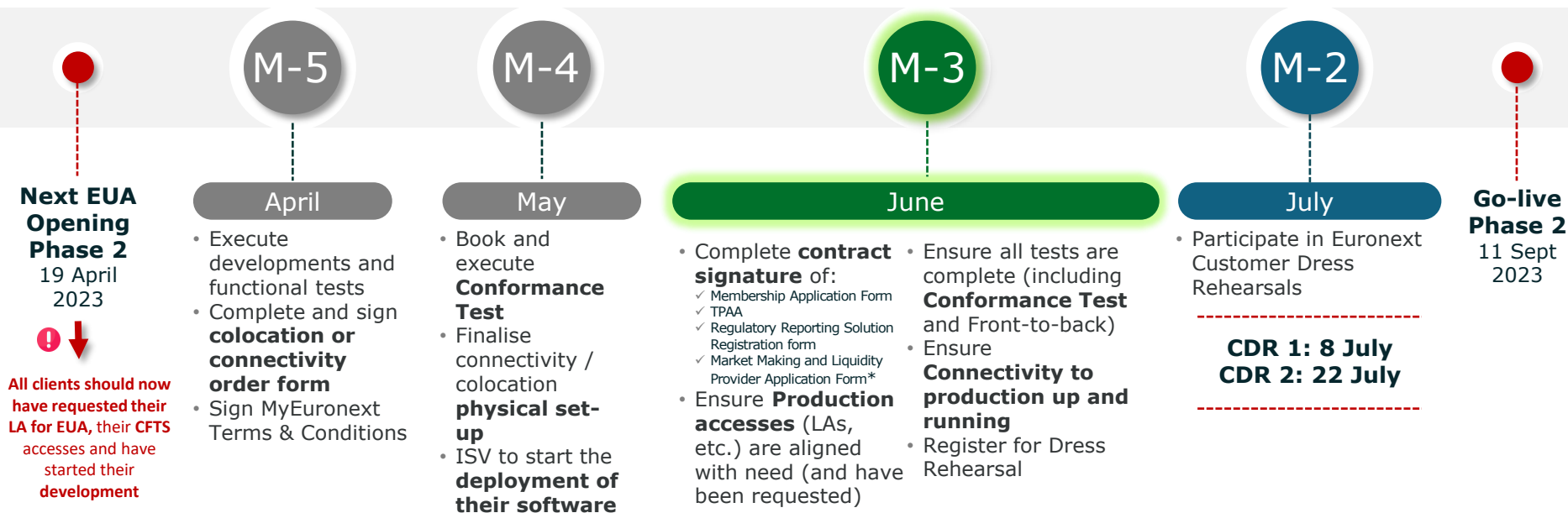
- ~4,000 SeDeX instruments
 - ~1,600 Cert-X instruments
- This is a first subset of instruments that covers a representative sample of the production instrument space
 - Further instruments can be configured upon the need
 - A subset of the above instruments is available for Front-to-Back testing

List of instruments usable for **testing** by clients and list of Instrument Group Codes with Trading Details (Market Model and Trading Hours) are available on [Connect](#) and [Borsa Italiana](#) websites

Millennium CDS test environment will for the moment remains available for clients (decommissioning will be communicated in due course)

Migration next steps overview

In preparation for the Dress Rehearsals (8 and 22 July), clients who have not done it yet are invited to book their conformance test or validate their self-certification.



The **Migration Guidelines** document is available for details on all the steps and related modalities of the migration. At the end of the document, a checklist is available for clients.



Clients Testing in Next EUA for Phase 2

By beginning of June, all clients should have finalised their developments & deployed their software

By end of June, all clients should have completed their tests and **be ready for the first mandatory Dress Rehearsal**

Note:

Success of the test(s) must be confirmed by the client through **dedicated webforms**

	Clients not yet connected to Optiq	Clients connected to Optiq	
		Trading on Borsa Italiana markets (common)	Trading on legacy markets
Functional Tests	✓	✓ Along with project deliveries*	✓ Along with project deliveries*
Conformance test	✓ Full	✓ Along with project deliveries*	✓ Along with project deliveries*
High Availability	✓	✓	✓
Market Data Gateway	✓	✓	✓ If new channels subscribed
Throttling	✓	✓	✗
Front-to-Back	✓	✓	✓
SLC/Transaction Reporting	✓	✓	✗

Customer Dress Rehearsals

- Mandatory
- Strongly Recommended
- Optional or N/A

**Depending on client set-up and implantation, please contact us for further information and guidance*

The Borsa Italiana migration onto Optiq and related changes are subject to regulatory approval

Documentation, Communication & Contacts



Info-Flash/Service Announcements

informing about key milestones and functional highlights on deliveries



Operational notices informing about technical changes related to delivered services and external specifications updates



Technical document (i.e. external specifications) detailing information on how to develop and implement Optiq®, TCS and Saturn features



Full details on the current Optiq® platform already available in the technical documentation on the [Euronext website](#)

Subscription to Info-Flashes and Operational Notices can be done through the [Connect Portal](#). Clients are invited to subscribe to the above-mentioned notifications and regularly consult the list of documents shared in the IT Documentation section on Connect.



Migration guidelines

guidance on how the migration plan will be rolled out



Guide to Trading System

information on functional changes for each of the segments - new version coming soon!



The Optiq Migration

Support Desk will liaise with you on a regular basis to support you in your readiness

FOR FURTHER INFORMATION ABOUT BORSA ITALIANA MIGRATION TO OPTIQ:

▪ Optiq Migration Help Desk:
Optiqmigration@euronext.com
+33 1 8514 8585
+39 02 4541 1399

▪ Optiq Migration page:
<https://connect2.euronext.com/en/membership/projects/bita-optiq-migration>

▪ You can also contact your Sales representative



QUESTIONS & ANSWERS SESSION



If there is not enough time to answer your questions, we will get back to you following the presentation. Thank you!



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