

# Technical User Group

## *Business update*

Gabriele Villa

Milan, 31st January 2013

# Trading at the Closing Auction Price (1)

The “Trading at the Closing Auction Price” phase will be introduced in order to provide clients with a further continuous trading session where trading can take place at the closing price.

The Trading at the Closing Auction Price session:

1. Is valid for the markets that operate on the Millennium IT platform, for those instruments where the a Closing Auction phase is supported;
2. Takes place only if the Closing Auction results in a valid auction price;
3. Will be initially activated only on MTA market;
4. Following order types will be allowed:
  - Market orders;
  - Limit orders with limit price equal to the Closing Auction Price.
5. Establishes a time-priority order.

# Trading at the Closing Auction Price (2)

Trading on the MTA market, including the Star segment and the MTA International, shall take place using the auction and continuous trading methods with the following trading hours:



The **Closing Price Publication (CPP)** Session is specifically designed for dissemination of the closing price for an individual instrument at the end of the Closing Auction.

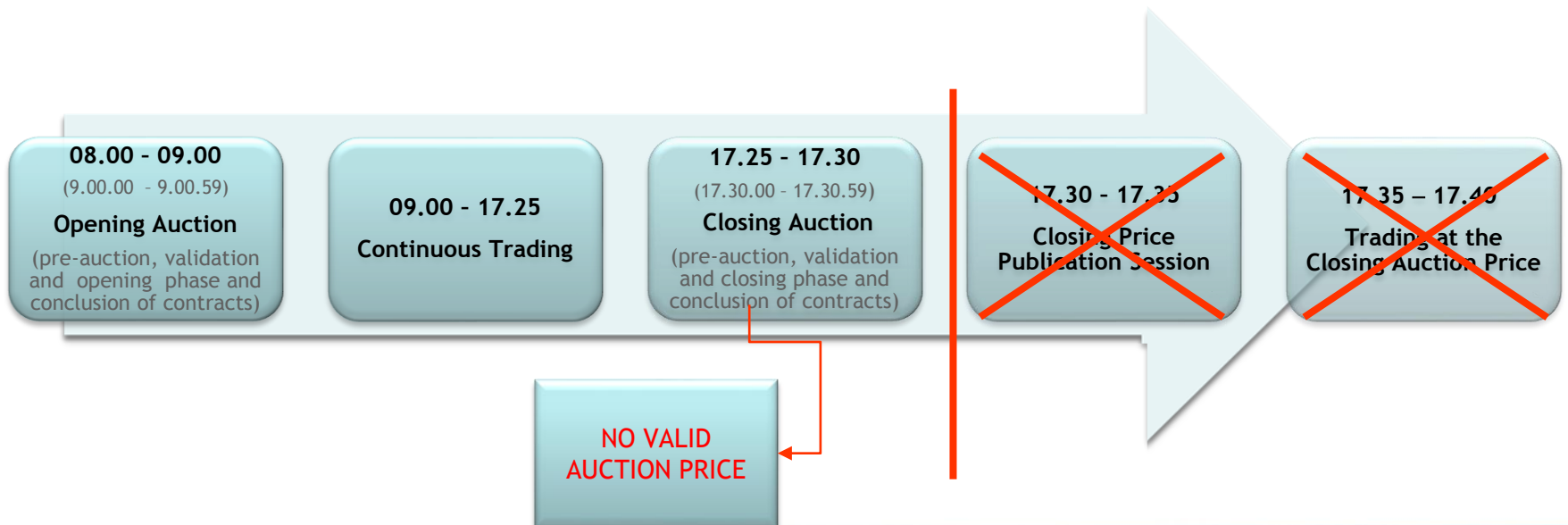
# Trading at the Closing Auction Price (3)

If there is no Closing Auction execution due to:

- An uncrossed book;
- A price monitoring;
- Market order extensions where the price is still outside the ruling parameters and any ruling minimum auction volume has not been satisfied;



The Closing Price Crossing session WILL NOT OCCUR



# Trading at the Closing Auction Price (4)

In case of unfilled orders:

- **Limit orders:** automatically transferred to the “Trading at the Closing Auction Price” phase, with the price and time priority of the original order;
- **Market orders:** automatically cancelled at the end of the Auction;
- **Market to limit orders:** transferred to the Trading at the Closing Auction Price phase, with a limit price equal to the auction price.

Timeline:

1. Official market consultation closed in January
2. Borsa Board of Directors/Annual general Meeting approval within end of February
3. Consob approval expected within the end of April / beginning of May
4. The “Trading at the Closing Auction Price” should be delivered in May/ June.

# Sponsored Access (1)

The Sponsored Access (SA) is a new market access facility Borsa Italiana want to introduce. It allows Exchange participants to provide trading low latency access to non-exchange members through their membership.

Sponsored Access operates via Interconnection in these markets: **MTA, MIV, MOT, SEDEX, ETFplus, TAH, ExtraMOT and AIM.**

**Non-members will be able to enter these orders:**

1. All types (limit, stop, stop limit, iceberg, market, market to limit);
2. Quotes, cross-orders, BTF;

**BUT**

Long orders will be rejected.

# Sponsored Access (2)

Key differences from the existing Borsa Italiana interconnection model:

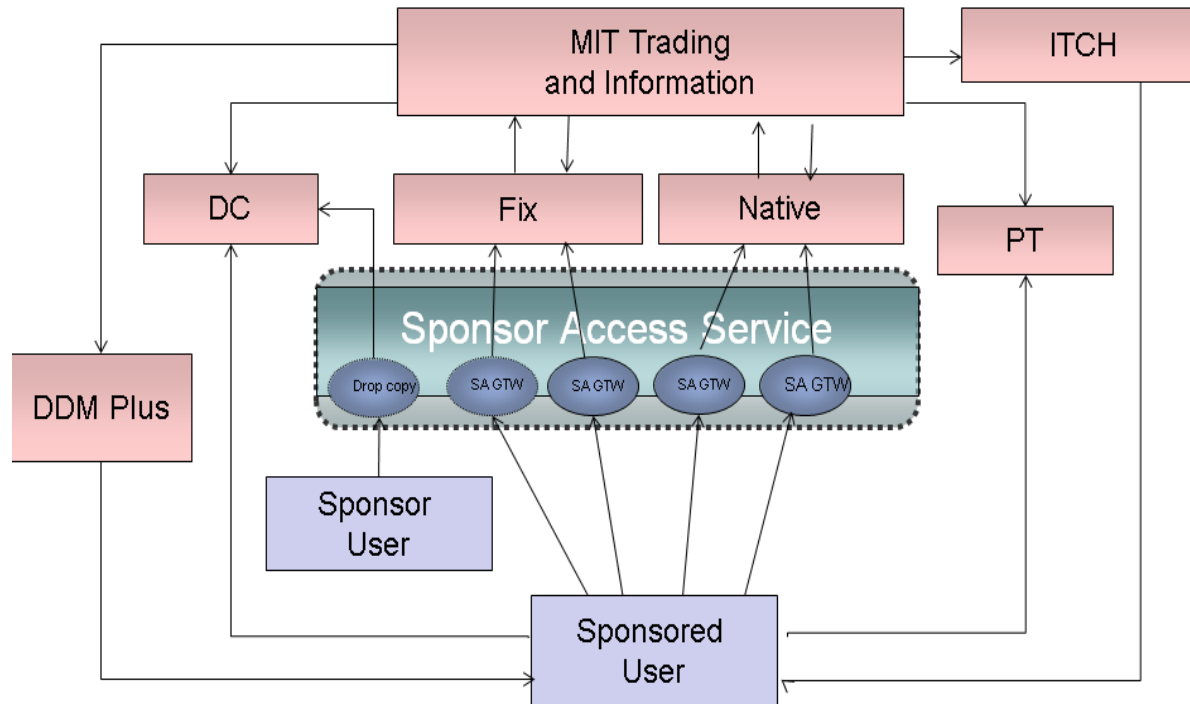
- Mandatory use of different CompIDs for each Sponsored User;
- Mandatory use of the «cancel on disconnect» functionality;
- Automatic disconnection of Clients in case the Sponsor lost the disconnection from the market;
- Notification by market intermediaries to Borsa Italiana of any technical breakdowns of the trading system of their Sponsored Clients.

Market Intermediaries will solely be responsible for all the orders sent via interconnection. The Borsa Italiana SA model allows Sponsors to define a high granularity of filters:

- Price band validation;
- Max gross consideration;
- Max order value;
- Max order quantity;
- Restricted instrument list.

# Sponsored Access (3)

- The following diagram shows Sponsor Access architecture and interactions:



- BIT SA should be delivered in May/ June.
- The second phase (IDEM market) should be delivered in October/November.
- Implementation costs are to be defined.



# Products offering

## IDEX

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- Starting from Friday 14th December a **new expiry** is available on IDEX, i.e. the second yearly future on Italian base load power.
- **Instructions** accompanying the Rules of the Markets are currently under review, in order to introduce the new expiry on the 1<sup>st</sup> trading day of September each year.
- Subject to Instructions review, IDEX will soon introduce **Peak Load futures**, i.e. based on power price calculated during the peak 12 hours of the day (8-20) from Monday to Friday. The Target Launch date is Q2 2013.

## IDEM

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- Starting from April 2013 (subject to Consob's approval), on IDEM will be available the new Dividend Stock Futures on Italian as well as European shares.

## AGREX

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- 21st January: Borsa Italiana launches **AGREX**, the new Agricultural Commodity Derivatives Segment of IDEM.
- Currently **Durum Wheat Futures** with 4 delivery months, i.e. March, May, September and December, and 5 expiries (4 +1), are negotiated on this segment.

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# Group Ticker Plant

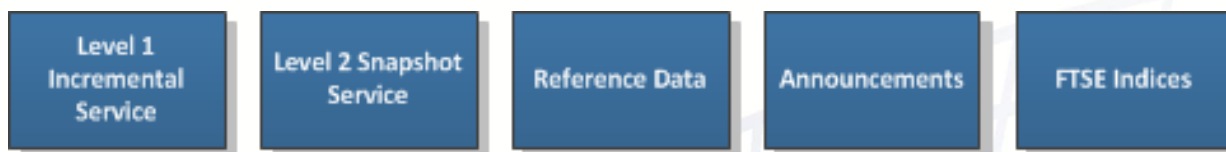
## Phase 2 Client Consultation

Silvia Petrosillo  
Marco Romano

# Introduction



- Group Ticker Plant Phase 1 successfully went live on December 3 2012. This Phase introduced the following:



for London Stock Exchange and Borsa Italiana (including IDEM) markets.

- Phase 2 of the Group Ticker Plant will introduce a full-depth incremental service for both London Stock Exchange and Borsa Italiana markets. The Group will also introduce Turquoise Equity, Turquoise Derivatives and MTS markets onto the Group Ticker Plant platform.
- Phase 2 service lines will be introduced through a number of sub-phases; this is done in an effort to minimise both Group and customer risk. London Stock Exchange services will be introduced first, closely followed by Borsa Italiana (including IDEM) services, Turquoise and finally MTS markets.
- Customers are reminded that only FIX-FAST and MDF/DDM-Plus are confirmed as being decommissioned at this time. Level 2-ITCH and HSVF services are unaffected.

# Communications



- The Group Ticker Plant project has provisioned a number of key guides in an attempt to facilitate client migrations from legacy services to new Group Ticker Plant services.

Identifier	Guide Title	Status
GTP001	Product Guide	Now available
GTP002	Technical Guide	Now available
GTP003	Statistics Guide	Now available
GTP004	Parameters Guide	Now available
GTP005	Testing Guide	Now available
GTP006	External Sources Guide	Now available
GTP007	Display Guide	To be published

- The Group Ticker Plant project will **not** use Service Announcements or BltClub as the primary method of communicating with clients. Clients should ensure they are registered on the project mailing list - available on the project microsite.

# Customer Testing



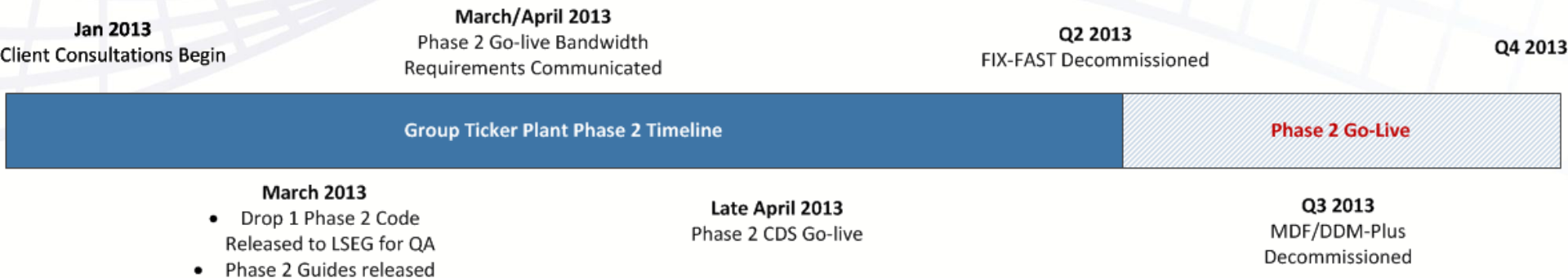
**London**  
Stock Exchange Group

- The Group is expecting to confirm that Dress Rehearsals will, unlike Phase 1, feature as part of customer readiness prior to the go-live of Phase 2 services. Customer Dress Rehearsal dates will be communicated as soon as they are confirmed, providing customers maximum opportunity to schedule resource.
- Customer Dress Rehearsals are anticipated to include a High-Volume period of testing; volumes will be both artificially created by our QA teams and by participating customers. This period will provide an opportunity to test internal Group systems but also provide customers an opportunity to load test solutions.
- The CDS environment is anticipated to be updated to support Phase 2 in late April 2013.
- Those customers who successfully certified applications as part of Phase 1 or Phase 1.1 are not anticipated to have to recertify the same application codeset if used to interact with Phase 2 service lines. Please refer to the Group's re-certification policy or contact your Technical Account Manager for further guidance.

# Timeline



- The Group Ticker Plant timelines are driven by a number of factors, namely customer readiness, application testing (both customer and QA), environment readiness and other Group critical-path projects.
- The indicative dates below are provided on a best endeavors basis and in an effort to assist our customers schedule resource appropriately.





# Additional Information



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## Phase 1 Bandwidth Requirements

100Mb is considered suitable for all Group Ticker Plant service lines introduced through Phase 1 - this does not include legacy market data services such as FIX-FAST, Level 2-ITCH, HSVF or MDF/DDM-Plus.

## Low Bandwidth Solution

The Group is conscious of the current economic climate and appreciates that some customers may not wish to provision 100Mb circuits to support Phase 1 services. As such, we are currently engaged with our development team on a GTP light-bandwidth solution which will see bandwidth requirements for Italian data sets reduced. Further details will be provided as soon as we are able.

## Phase 2 Bandwidth Requirements

The Group plans to issue indicative bandwidth requirements post-receipt of the Phase 2 codeset.

# Phase 2 - Protocol



- The majority of Group Ticker Plant message specifications and protocol characteristics will remain unchanged between currently live product and Phase 2 - this includes both real-time multicast and TCP/IP replay and recovery services. Additional values may be added to some existing fields to support Turquoise and MTS markets.
- The Phase 2 Incremental service whilst disseminating full order book depth, will also disseminate reference data, instrument status, statistical information and post-trade information.
- Phase 2 incremental services will see additional standalone messages introduced to support Group Ticker Plant data publication, namely:
  - **Add Order Incremental** - sent to indicate additional orders being added to the book;
  - **Delete Order** - sent to instruct subscribers to remove an order from the book;
  - **Modify Order** - sent to instruct subscribers to update price/size of an order.
- Trade information will continue to be broadcast through Phase 1 message libraries. As such, order book and trade management will be separately communicated (there will be no concept of Order Executed with Price Size).

# Phase 2 - Statistics



- Official Opening and Closing Prices will be calculated by the Group Ticker Plant and communicated to customers. Currently, these statistics are redisseminated by Group Ticker Plant but not calculated. The derivation logic of these statistics will be similar as today.
- Our Statistics package (Volume, VWAP, Number of Trades, Turnover) will be reduced to 4 implied decimal places from the existing implied 8 decimal places. This will ensure, during periods of high trading volume, that our existing field lengths are not overrun.
- Indicative Auction Information will be fully supported for London Stock Exchange markets - this includes Imbalance Quantity and Imbalance Direction which are not currently provided.

# Phase 2 - Architecture



- The internal product architecture supporting Phase 1 and Phase 2 is different. Phase 1 Group Ticker Plant delivered significant functional uplifts versus that of our legacy real-time market data solutions; however, Phase 1 was not anticipated to deliver performance improvements. Phase 2 aims to deliver the performance improvements to our customers.
- Phase 1: the Group Ticker Plant is subscribed to existing Level 2 ITCH gateways and SOLA RTF feeds, enriching data prior to redistributing in the Group Ticker Plant multi-asset class protocol.
- Phase 2: the Group Ticker Plant will connect directly into the Millennium Exchange matching engines, leveraging the performance of hardware accelerated normalisation, book build, enrichment and subsequent dissemination. This will circum-navigate existing software processing modules, feed handlers and internal distribution engines.

# Phase 2 - Instruments



- Currently Group Ticker Plant provisions a GTP Instrument ID for each and every instrument on the solution. No instrument consolidation or normalisation is performed. Most instruments are currently unique, but through the introduction of Turquoise markets in Phase 2, instruments may be traded across multiple venues and all supported on the Group Ticker Plant.
- As per section 4.3.2 of GTP001 - Product Guide, ‘similar’ instruments will be allocated the same GTP Instrument ID. Customers should manage the order book, trades, statistics and other real-time information through a combination of both the GTP Instrument ID and Source Venue.
- Instruments will be classed as ‘similar’, and therefore carry the same GTP Instrument ID if the following 4 attributes are the same across source venues: ISIN, Currency, Primary Market and Country of Register. These attributes have been identified following significant internal discussion and industry review.
- The following Source Venues will exist on Group Ticker Plant: London Stock Exchange, Borsa Italiana, Borsa Italiana - IDEM, Turquoise Equity- Lit Book, Turquoise Equity- Dark Book, Turquoise Derivatives and MTS.

# Further Information



**London**  
Stock Exchange Group

- For further information clients should contact their usual Group Contact.
- **Technical Enquiries** can be forwarded to the Client Technology Group (UK):

Telephone: (+44) 207 797 3939

Email: [londontam@londonstockexchange.com](mailto:londontam@londonstockexchange.com)

- **Media Enquiries** can be forwarded to:

Telephone: (+44) 207 797 1222

Email: [newsroom@londonstockexchange.com](mailto:newsroom@londonstockexchange.com)

- Project microsite provides further information and mailing list registration:

[www.londonstockexchange.com/oneproductinfinitepossibilities](http://www.londonstockexchange.com/oneproductinfinitepossibilities)

# London Stock Exchange SOLA project update

Roberto Fumagalli  
Technical Account Manager  
Technical User Group, Milano - 31 Gennaio 2013

# SOLA Functional Enhancements

- **Key Enhancements**
  - Introduction of cross/committed orders (incl. block size) on strategies
  - Dissemination of the “At-The-Money” series for IDEM
  - Addition of new trading currencies for Turquoise and IDEM derivative markets.
  - Enhanced controls in setting of logical connections.

On the following page is a list of the protocol flows that will be subject to change. For each flow the names of the messages impacted and the update type is provided. Possible update types:

- **New value:** the format of the message has not changed, but new values are supported for a specific field;
- **Added field:** new field added to an existing message that will impact the length.
- **New message:** introduction of a new message.



# SOLA Protocol modifications

Flow	Message Name	Update
HSVF	C - Option Trade CF - Futures Trade CS - Strategy Trade D - Option Request for Quote (RFQ) E - Instrument Schedule Notice Option F - Option Quote FF - Futures Quote FS - Strategy Quote H - Option Market Depth HF - Futures Market Depth HS - Strategy Market Depth I - Option Trade Cancellation IF - Futures Trade Cancellation IS - Strategy Trade J - Option Instrument Keys JF - Futures Instrument Keys JS - Strategy Instrument Keys N - Option Summary NF - Futures Summary NS - Strategy Summary	<p><b>New Values:</b> Data type Price Fraction Indicator</p>

Flow	Message Name	Update
HSVF	JS - Strategy Instrument Keys	<b>Added fields:</b> Maximum/Minimum threshold Price sign  <b>Added fields:</b> Strategy Pricing
HSVF	J - Option Instrument Keys JF - Futures Instrument Keys JS - Strategy Instrument Keys	<b>New values:</b> Supported for Currency field
HSVF	RS - Connection Message	<b>New value:</b> HSVF protocol version
SAIL	MU - ATM Monitoring	<b>New message.</b>
SAIL	IX - Underlying Price	<b>New message</b>
FIX	Execution Report message (35=8)	<b>New values:</b> for Error Codes

# SOLA Project Timelines & Certification

- Customers should note that this release of SOLA is not backwards compatible.
- Functional enhancements have been available in CDS since 3 December 2012.
- IDEM Production dates

Date	Event
Sat 9 Feb 2013	Dress Rehearsal (Mandatory)
Sat 16 Feb 2013	Dress Rehearsal (Optional)
Sat 23 Feb 2013	Go-Live Weekend
Mon 25 Feb 2013	Production Live Date

- Your application must be certified by the 1st Dress Rehearsal
- Certification is only required once and will be valid to use across IDEM, Turquoise and Oslo Bors derivatives markets.

# IDEM Certification Process

- **Certification Process**
  - Customers not developing to any of the new functionality will need to complete a Check List Form for each interface(SAIL/FIX).
  - Customers developing to any part of the new SOLA functionality will need to complete the full conformance test for the relevant interface.
  - The checklist form and conformance test documentation are available on the SOLA-IDEM section of the Borsa Italiana website, link below.

<http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/migrazioneidem/migrazioneidem.en.htm>

## MDF/DDMPlus changes

- CDS environment with the new version of EAPI libraries SOLA 5 compliant
  - 212.239.27.148 port 6868 - 6869
- A new attribute, strategyPricing, is added to the DdmIdemCombInstrumentData class (INSTRUMENT\_DATA message reserved for Strategy Instruments)
- Old versions of the client API will be able to unpack the changed message but will naturally not see the new attribute.

# Contact details

- Client Technology Services Italy - Borsa Italiana  
Client Services Team  
Tel: 02/72426606/647/348  
[Clients-services@borsaitaliana.it](mailto:Clients-services@borsaitaliana.it)
- Client Technology Services Italy - Borsa Italiana  
Service Desk Italy  
Toll free: 0080026772000  
From Mobile: +39 0245411399  
[Service-desk@borsaitaliana.it](mailto:Service-desk@borsaitaliana.it)

# Millennium Exchange Enhancements - Release 8

31<sup>st</sup> January 2013

Flavio Ravotto  
Technical Account Manager  
Client Technology Services Italy

# Millennium Exchange Enhancements

## Release 8

- The London Stock Exchange Group Millennium Exchange systems are being upgraded to bring functional, performance and operational enhancements to the MIT Trading and Data Feed interfaces
  - Functional enhancements include:
    - Introduction of Closing Price Crossing (CPX) Session (under CONSOB approval)
      - Introduction of Single Side Quoting option
    - Single Side Quoting might replace (partially or totally) the single side Specialist activity via named order when only one side of the book is covered by the quoting obligation (e.g. BID only quoting, BTP Italia collocation, OPA, etc.)
- Operational enhancements include the convergence of code sets across London Stock Exchange Group markets for greater operational efficiency and improved customers' release management
  - Software Vendors and Member Firms that develops in-house applications may use the same code version across all London Stock Exchange Group markets
  - Market Functionalities are activated market by market according to market models (that differ across London Stock Exchange Group markets)



# Millennium Exchange Enhancements

## New Closing Price Crossing (CPX) Session



**Borsa Italiana**  
London Stock Exchange Group

- Impacted market: MTA
  - Duration: 5 minutes after the Closing Auctions
- Instruments' Official Closing Prices are not modified during this session
  - Allows to trade at the Closing Auctions price
- Limit orders and market to limit orders are brought from the Closing Auction, so order book will be available and disseminated by Borsa Italiana Data Feed services
- Trades executed during CPX will be disseminated by Borsa Italiana Data Feed services (ITCH, MDF/DDM Plus and GTP)
  - VWAP statistics (disseminated by GTP and MDF/DDM Plus) will not be changed during this session
  - At the end of the session, MDF/DDM Plus will disseminate a new OfficialClosingPrice message with updated statistics (VWAP, Closing Price and Best Bid and Offer will not be updated)
  - GTP will update Volume, Turnover and Number of Trades statistics with Trades executed during CPX

# Millennium Exchange Enhancements

## Customer Impact

### Protocol Changes

- Native Trading Gateway
- Message length of the *Execution Report* will increase to support new field(s)
  - New *Reject Codes* will be introduced
- FIX Trading Gateway, Drop Copy Gateway, Post Trade Gateway
  - New FIX tag(s) being sent in *Execution Report* messages
    - New *Reject Codes* will be introduced
  - New fields will be managed on Off-Book (MiFID OTC) trades

### Certification Policy

- Mandatory re-certification for all Native and FIX Trading Gateways
- Self-certification checklist approach will be applied for customers that will not develop new functionalities and did not develop impacted ones
- Any other software requiring a code change will also need to be re-certified in accordance with our general Certification Policy

# Millennium Exchange Enhancements

## High Level Timeline

### **Documentation and CDS availability**

- Customer documentation will be issued by the end of February 2013
  - Protocol changes will be outlined in the docs in order to facilitate customers' code changes
    - Release 8 will be available in CDS by mid-March

### **Certification**

- Conformance Tests and Checklists will be scheduled in April-May 2013

### **Dress Rehearsals**

- At least one Dress Rehearsal session will be scheduled before the Go-Live

### **Go-Live**

- Go-Live is currently scheduled by the end of May
  - London Stock Exchange and Turquoise will Go-Live with Release 8 after Borsa Italiana

# Millennium Exchange Enhancements

## Contacts

### Client Technology Services Italy

- **Technical Account Management Italy**  
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