

IDEM: Guide to the Trading System

V 1.9 October 2014



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1.0 Introduction

1.1 Purpose

The purpose of this document is to provide customers with the knowledge and technical details necessary for accessing and using the SOLA trading system.

This IDEM Business Design Guide provides essential information for participants and independent software vendors in the functional design of their application in order to interface with SOLA using the native SOLA Access Information Language (SAIL) protocol, FIX and High Speed Vendor Feed (HSVF) protocol.

1.2 Relevant Exchange Communication channels

The SOLA Access Information Language (SAIL) is the SOLA native protocol for the market making and regular order management; it allows orders and quotes insertion.

The Financial Information eXchange (FIX) Protocol is a messaging standard developed specifically for the real-time electronic exchange of securities transactions. FIX is a public-domain specification owned and maintained by FIX Protocol, Ltd.

The High Speed Vendor Feed (HSVF) is the SOLA native data dissemination feed; it is a high speed transmission protocol which broadcasts real-time trading and statistical information from SOLA, including trades, quotes, market depth, strategies, bulletins, summaries and other statistics. HSVF uses a TCP/IP broadcast interface. Each message type is fixed in format and messages are non-blocked. Re-transmission of any data is available.

1.3 Document History

Issue	Date	Description
1.0	December 2013	First version
1.1	January 2013	Revised examples, contract specification and further details.
1.2	February 2013	Version for Customer
1.3	August 2013	Added Single Stock Dividend Futures in sections 3.1.1, 3.1.2.1, 3.4, 5.2, 7.2, Appendix 1. Corrected the FLEXCO naming convention in section 3.1.2.2 Corrected the Pricetype parameters adding "Opening" in section 5.1.1 Align the IDEX contract specifications in sections 5.2 and Appendix 1 (Peakload). Enrich Market Maker Protection details in sections 7.5.1 and 7.5.5
1.4	October 2013	Correction on actions available for Market Members on "End of Consultation" phase in section 4.3.7. Corrected in the FLEXCO naming convention the length for field [identification number] in section 3.1.2.2.
1.5	November 2013	Updated Examples in sections 3.1.1, 3.1.2.1, 7.3.4 Reviewed the Contract Specifications in sections 5.2, 7.2 and Appendix 1.

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Issue	Date	Description
1.6	April 2014	Updated description for Stock Dividend Futures and naming convention for Stock Futures cash settled in section 3.1.1.
1.7	May 2014	Updated Logical architecture of the IDEM Trading System
1.8	September 2014	Added Weekly stock options contract specifications (Appendix 1) and update in sections 3.1.1, 3.4, 4.5, 5.2, 7.2. New document layout
1.9.1	October 2014	Added SSF up to 3 years. Added option for physical delivery for IDEX contracts (Appendix 1).

1.4 Enquires

For any technical question about SOLA trading system for the IDEM market, please contact the Service Desk at Borsa Italiana:

- Toll Free number: 0080026772000
- From Mobile: +39 02 45411399
- Email: service-desk@borsaitaliana.it

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2.0 Architecture

The IDEM Trading System is based on a dedicated technological infrastructure and on the SOLA trading software application. It consists in all the information and communication services supporting the functioning of IDEM .

The logical architecture of the IDEM Trading System is represented in Figure 1 and includes: i) the SOLA System, and: ii) its Interconnected Systems.

The SOLA System provides matching functionalities and allows access to such matching functionalities for Member Firms and for Borsa Italiana (and the Clearing House).

The SOLA primary site is located in Milano, whilst the Disaster Recovery site is located in London.

The SOLA system is composed by:

- the Central System (or back-end level), including the SOLA Trading Engine and the SOLA Routing Engine;
- the Access System (or front-end level), including 6 components.

Central System and Access System use HP servers with Sun Solaris and Windows operating systems.

2.1 Central System (back-end level)

The Central System includes: i) the SOLA Trading Engine, and: ii) the SOLA Routing Engine.

Central Systems are responsible for processing the requests transmitted by Member Firms through the peripheral systems, and for executing internal trading functionalities (automatic matching of orders, management of the market trading phases, etc.). Moreover, it distributes real-time information generated by the Central System order book, general notification messages, execution notification messages, etc. and dispatched to all Member Firms.

The SOLA Trading Engine is the application that manages the central order book and provides comprehensive trading related services. It supports Schedule Management functionality, and generates feeds required by all the other business domain functions (Post Trading, Market Data Dissemination as well as Order, Applications and Systems Management).

The SOLA Routing Engine manages connections between Market Participants and the Trading Engine, as well as commands sent by monitoring to the SOLA Trading Engine. It is the sole application responsible for data persistence. Whilst other applications operating in the production environment are built to sustain software or hardware failure without loss of data, an additional layer of data security is necessary to cover cases of catastrophic failures.

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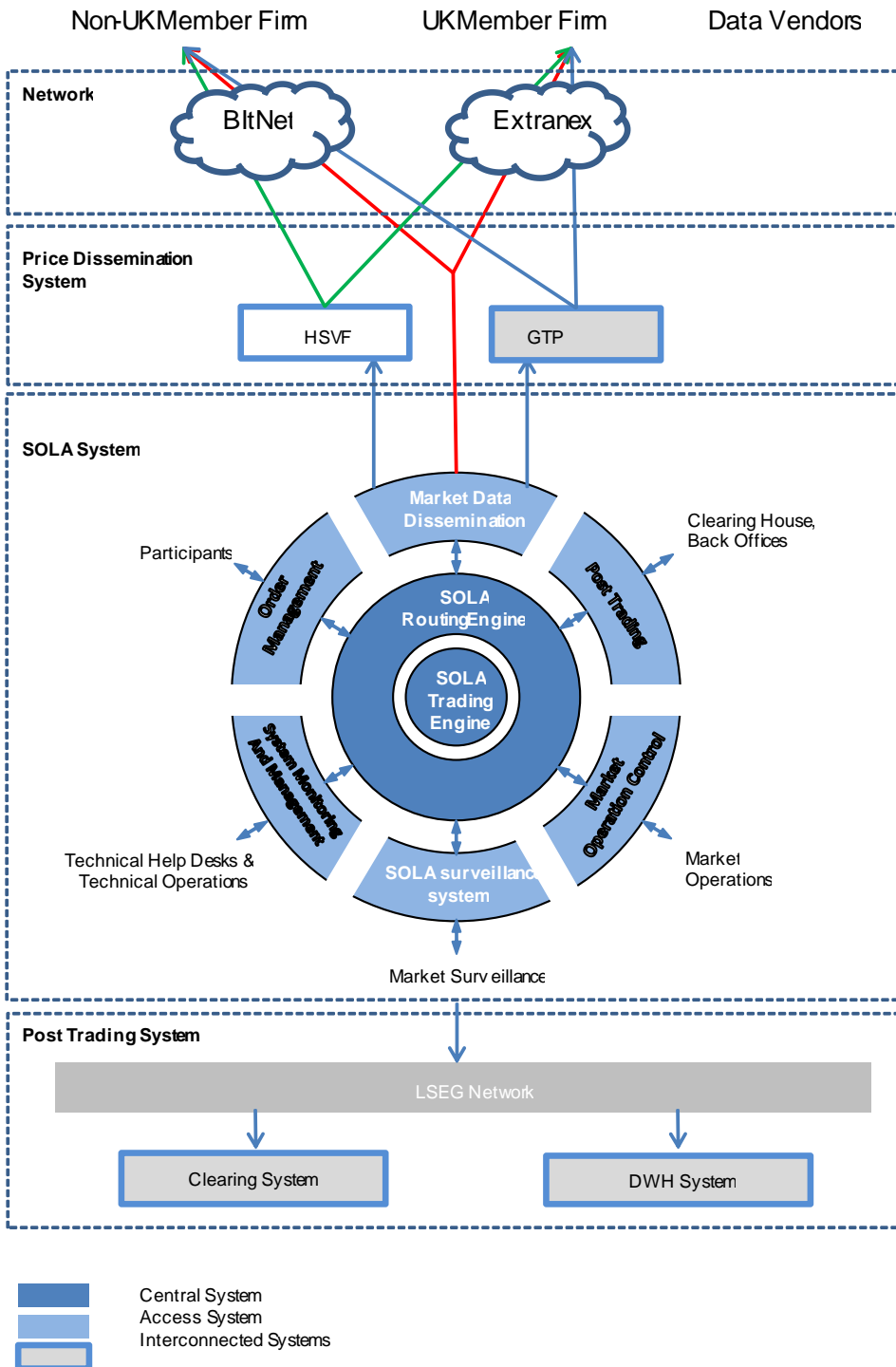


Figure 1: Logical architecture of the IDEM Trading System

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2.2 Access System (front-end level)

The Access System is responsible for allowing members to access trading Central System' functionalities (this is possible through the SAIL and FIX protocols) and to receive the market data feed through the HSVF SOLA protocol.

The Access System includes 6 components:

- Order Management: supports all the order management functionalities offered by SOLA. It supports the SAIL protocol, which is the native SOLA protocol for order and quotes management (Market Makers can use only this protocol to insert bulk quotes) and the FIX protocol, the international standard protocol for orders management. FIX is a two-way communication protocol between the trading engine and FIX client applications. The order management front-end translates inbound user messages in SAIL protocol and outbound messages into FIX protocol;
- Market Data Dissemination: disseminates anonymous market information to IDEM participants and to the Market Monitoring and Surveillance teams of Borsa Italiana. This front-end includes the HSVF Gateway, which broadcasts real-time trading and statistical information;
- Post Trading: is responsible for the dissemination of the trades to the clearing system. Clearing members can access trading information through the BCS interface, provided by CC&G;
- The other three components (System Monitoring and Management; SOLA Surveillance System; Market Operation Control) provide real time and historical data to the teams involved in the analysis and reconstruction of market events. Furthermore, they provide functionalities related to the management of systems through graphical user interfaces.

SAIL Protocol

The SOLA Access Information Language (SAIL) protocol is the native protocol for SOLA.

The SAIL protocol is defined at two levels: technical and business. The technical level deals with the delivery of data while the business level defines business-related data content.

FIX Protocol

The derivatives platform utilises FIX 4.2 with a few exceptions as specified in the Fix Design Guide. The FIX interface does not provide functions related to Market Making. Participants who intend to be Market Makers must use the native SOLA Access Information Language (SAIL) protocol.

HSVF Protocol

HSVF is the protocol through which customers can retrieve the native market data feed from the IDEM market.

It is TCP/IP broadcast interfaced. Each message type is fixed in format and messages are non-blocked (i.e. the Exchange does not wait for acknowledgement before sending the following message). Re-transmission of any data is available. HSVF messages consist of a standard message header followed by the message body, which varies in format according to the message type.

Here are the main topics of the HSVF protocol:

- Connection: no authentication is provided by the system; participants connect to specific port and then send connection message (RS message);
- End of day messages: after the closing of the market, messages that indicate that the day's transmission is completed are sent;

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- Users customization: members can tailor the feed to their needs, using the connection message subscription mechanism: members can request messages for:
 - Subsets of underlying (e.g.: UniCredit only, or as many underlying as needed);
 - Derivatives instrument types (options, futures, both);
 - Data type (market depth, top of book, trades, referential data);
- Aggregated orderbook: the aggregated orderbook (5 level) is available in real time (no holdback timer is provided);
- Backward compatibility: it is possible for participants to use the previous protocol version for a period, protocol-id must be specified in the user connection message;
- Messages re-alignment: re-transmission can be forced by sending a specific message to the system; no query transactions are available;

During the session, the trading system distributes the information flows in real-time, in the same way and with the same contents to all market operators and information providers for distribution to the public.

2.3 Interconnected Systems

Downstream systems interconnected to the SOLA System are:

- Data Warehouse (DWH) system: this is the Borsa Italiana data warehouse where all trading data are stored;
- Clearing system: this is the Clearing House system;
- GTP: it is the new Group market data distribution system.

2.4 Market Connectivity

The Service is available starting from 8:00 a.m. (CET) until the dissemination of the closing prices by the Clearing House, after the end of the daily trading session.

The following paragraphs describe how connections to the trading platform are managed by the SOLA System.

Member Firms

In order to access IDEM, Member Firms are provided dedicated access profiles to the SOLA System by Borsa Italiana. These profiles are assigned according to the membership profile and User category requested by the Member Firm to Borsa Italiana via the Customer Relationship Portal.

Each Member Firm is assigned a unique identification code (Member ID), corresponding to the Member Firm's CED code.

User categories (Front-End Users)

Front-End Users (here following, "Users") are the entry points to the SOLA platform. The following User categories are currently available. Their specifications are defined by Borsa Italiana and described below:

- Standard User;
- Advanced User;

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- PTP User;
- Basic Quoting User;
- Additional Quoting User;
- Panic Quotes User;
- Drop Copy User.

Each User is associated to: i) a Connection Type; ii) a specific capacity limit in term of the maximum number of allowed transactions per second and iii) trading privileges (e.g. the PTP User is limited to FTSEMIB and mini FTSE MIB index futures).

A Member Firm can request several Users at the conditions defined by Borsa Italiana in the Price List for trading services, depending on the Member Firms' requirements.

Front-Office Users are the entry point to the SOLA System. The available profiles are defined by Borsa Italiana. Standard Users are available to Member Firms and the pricing for additional components are reported in the Price List for Trading Services.

User Category	Connection Type	Capacity Limit	Description
Standard User	OR (Order Routing) or FX (FIX) connections types	Max. 10 (single order) tps	
Advanced User	OR (Order Routing) or FX (FIX) connections types	Max. 30 (single order) tps	
PTP (Proprietary Trading Program) User	OR (Order Routing) or FX (FIX) connections types	Max. 50 (single order) tps	PTP Users can be used only to send orders on proprietary account on the FTSE MIB futures and Mini futures. The maximum number of PTP Users for each Member Firm is 3.
Drop Copy User	DC (Drop Copy)		Allows Member Firms to receive all orders and trades sent by all the Traders of the Member Firm. Every Member Firm can ask up to 2 DC User connections.

User Categories reserved to Market Makers and Specialists

Basic Quoting User	Bulk Quotes (BQ)	Number of BLQ per second determined by market making/specialist obligations (100 single quotes per single BQ)	Includes one or more bulk quotes (BLQ) per second. The number of allowed BLQ per second is equal to 75% of the number of underlying/group covered by the Member Firm's maker/specialist obligations. This value is rounded up, and a minimum of 4 BQ per second is guaranteed. The Market Maker/Specialist can divide the available number of BQ per second on one or more Quoting Users. Each BLQ comprise a maximum of 100 single quotes, that has to be sent on instruments belonging to the same group.
Additional Quoting User	Bulk Quotes (BQ)	4 BLQ per second (100 single quotes per single BLQ)	Includes 4 bulk quotes (BLQ) per second. Each BLQ can comprise a maximum of 100 single quotes and has to be sent on instruments belonging to the same group. A market maker/specialist member can ask to add the 4 BQ per second of an additional Quoting User to an already existing Basic Quoting User.

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User Category	Connection Type	Capacity Limit	Description
Panic Quotes User	Panic Quotes (PQ)	Number of PNQ is equal to available bulk quotes (BLQ)	Allow to cancel quotes inserted through a Quoting User. Market makers/specialists can send a number of Panic Quotes (PNQ) allowing cancelling all the quotes inserted on every underlying covered by their quoting obligations. PNQ are structured like BLQ, allowing to cancel a maximum of 100 single quotes for each transaction.

Connection Types

Each User is associated to a specific Connection Type, allowing to interact with the platform using a specific set of Message Types, as described in the following table:

Message Types	Connection Types				
	OR	BQ	PQ	DC	FX
SAIL Order Entry (OE)	✓				
SAIL Order Modification (OM)	✓				
SAIL Order Cancellation (XE)	✓				
SAIL Request For Quote (RQ)	✓	✓			
SAIL Bulk Quotes (Qi, BD)		✓			
SAIL Global Cancellation (GC)		✓	✓		
FIX 4.2 Standard messages					✓

Available Connection Types are:

- OR (Order Entry): available to all Member Firms to enter, cancel, modify orders and to submit request for quotes via SAIL Protocol;
- BQ (Bulk Quotes): reserved to market makers and specialists. Allows to respond to request for quotes and to insert quotes on the market through dedicated SAIL messages, including up to 100 single quotes in a single message;
- PQ (Panic Quotes): reserved to market makers and specialists. Allows to jointly cancel quotes through dedicated messages (Sail Global Cancellation Message GC), including up to 100 single quotes cancellations in a single message via SAIL Protocol;
- DC (Drop Copy): available to all Member Firms. Allows to receive all the orders and trades sent by all the Traders of the Member Firm via SAIL Drop Copy;
- FX : available to all Member Firms to enter, cancel, modify orders via FIX.

Any Trader placing a message not supported by the Connection Type of the selected User will receive an ERROR message, reporting the associated error code.

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Identification of Users

Each Member ID is provided with one or more pairs of User IDs and Passwords (one pair of User ID and password for each subscribed User). The format of a User ID is the following:

[Connection Type]	[Incremental User Identifier]	[Member ID]
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Where:

- Connection Type is a two letter acronym identifying the Connection Type (OR, BQ, PQ, DC, FX);
- Incremental User Identifier is an incremental number identifier for each User attributed to a Member Firm, starting at 01 for each Member ID;
- Member ID is the CED code of the Member Firm.

The following are the formats for the available User IDs, where XX is to be replaced by an Incremental Number Identifier, starting at 01 for each Member ID:

- OR + XX + CED Code (OR = Order Routing)
- BQ + XX + CED Code (BQ = Bulk Quote)
- PQ + XX + CED Code (PQ = Panic Quote)
- DC + XX + CED Code (DC = Drop Copy)
- FX + XX + CED Code (FX = FIX)

Each Member Firm will be attributed one Standard User (associated with the OR Connection Type, allowing for order entry, order cancellation, order modification and RFQs).

In addition, each Member Firm acting as a market maker or specialist will also be attributed:

- one Basic Quoting User (associated with the BQ Connection Type, allowing for bulk quotes, RFQs and Global Cancellations), with capacity defined on the basis of the number of covered instruments;
- one Panic Quote User.

Additional Users are available on request.

Example of User IDs for a Member Firm (CED code 1234) with a Standard User and a Drop Copy User:

OR011234: OR = Connection Type: Order Routing
 01 = Incremental User Identifier: 01
 1234 = Member ID (CED code): 1234

DC021234: DC = Connection Type: Drop Copy
 02 = Incremental User Identifier: 02
 1234 = Member ID (CED code): 1234

Connection Security

During the authentication procedure of a SOLA User-ID into the trading system, the Member Firm password is encrypted with the MD5 algorithm. The MD5 Message-Digest algorithm is a cryptographic function that produces a 128-bit hash value.

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Throttling

A throttling mechanism is implemented in SOLA in order to avoid system overload in case of peaks of transactional activity. For this reason, each User category is assigned a maximum number of transactions per second ("tps"). The maximum number of transactions per second allowed for each User category is established by Borsa Italiana and described in the User Categories table.

The timeslot considered for the frequency is one second and the transactions exceeding the specified limit are managed in the following timeslot, increasing queues on the central systems.

3.0 Market Overview

IDEM is the derivatives market managed by Borsa Italiana, where futures and option contracts on i) financial instruments, ii) interest rates, iii) currencies, iv) commodities and v) related indices can be negotiated.

IDEM is currently organised in 3 segments, as specified in the Instructions accompanying the Rules (art. IA.9.2.1):

- IDEM Equity segment: dedicated to derivatives contracts on financial instruments, interest rates, currencies and related indices. Derivatives contracts on stocks and related indices are currently traded;
- IDEX segment: dedicated to derivatives contracts based on Energy related commodities and indices. Power derivatives are currently traded.
- AGREX segment: dedicated to derivatives contracts based on Agricultural related commodities and indices. Durum wheat derivatives are currently traded.

The IDEM market currently offers trading services on the following products:

- futures;
- options;
- combinations of futures or options.

3.1 Traded Contracts and Series

Borsa Italiana defines the features of the derivatives contracts admitted to trading on the IDEM market in the Rules (art. 5.1.1) and in the Instructions accompanying the Rules (art. IA.9.1). IDEM contract specifications are summarised in Appendix 1.

Throughout this document, the term "Standard Contract" is used to indicate an individual futures or options contract.

For each Standard Contract, a Series is defined as a unique combination of:

- underlying¹;
- strike price;
- lot size;
- expiry date;

¹ For stock options and stock futures only. Delivery period and profile (baseload or peakload) for power futures.

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— settlement type (cash vs. physical delivery).

Series are managed in SOLA as an "Instrument Series" and it is identified with an Instrument ID.

Combinations of Series of Standard Contracts can be referred to as "Strategies".

In SOLA, each Instrument Series is associated to a unique Series Name. The Series Name is defined according to the specific naming scheme that is different for Standard Series, Standard Combinations and FLEXCO.

Standard Contracts

The following Standard Contracts are available on the IDEM market .

	Contract Name	IDEM Segment	Description
Futures Contracts	FTSE MIB Futures	IDEM Equity	Futures contract based on the FTSE MIB index
	FTSE MIB Mini Futures	IDEM Equity	miniFutures contract based on the FTSE MIB index
	FTSE MIB Dividend Futures	IDEM Equity	Futures contract based on the FTSE MIB Dividend index
	FTSE 100 Mini Futures	IDEM Equity	miniFutures contract based on the FTSE 100 index
	Stock Futures	IDEM Equity	Futures contract based on individual shares
	Pan-European Stock Futures	IDEM Equity	Futures contract based on European individual shares
	Single Stock Dividend Futures	IDEM Equity	Futures contract based on ordinary gross dividend paid by underlying individual shares
	Power yearly futures	IDEX	Yearly (baseload or peakload) Futures contract based on Electrical Energy
	Power quarterly futures	IDEX	Quarterly (baseload or peakload) Futures contract based on Electrical Energy
	Power monthly futures	IDEX	Monthly (baseload or peakload) Futures contract based on Electrical Energy
	Durum Wheat futures	AGREX	Futures contract based on Durum Wheat
	Options Contracts	FTSE MIB Options	IDEM Equity	Options contract based on the FTSE MIB index
FTSE MIB Weekly Options		IDEM Equity	Weekly option contracts based on the FTSE MIB index
Stock Options		IDEM Equity	Options contracts based on individual shares
Weekly Stock Options		IDEM Equity	Weekly option contracts based on individual shares

The Series Name for Standard Series is defined according to the following naming scheme.

[root]	[year]	[month]	[strike]	[corporate action flag]
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Where:

1. [root] = Product/Underlying code, max. 6 chars (e.g. FIB for FTSE MIB futures, ENI for futures/options on ENI S.p.A.)

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- [year] = 1 char, corresponding to the last digit of the year (e.g. "5" for 2015)
- [month] = 1 char, representing the expiry month of the Instrument Series;
- [strike] = strike price of the Instrument Series (max. 10 chars)
- [corporate action flag] = 1 char, according to the rules described (e.g. X, Y, Z)

Available roots are the following:

- FIB = futures on the FTSE MIB index (IDEM Equity)
- MINI = mini futures on the FTSE MIB index (IDEM Equity)
- FDIV = future on the FTSE MIB Dividend index (IDEM Equity)
- MIBO = call and put options on the FTSE MIB index (IDEM Equity)
- IDEBM = Future on the monthly contract "Baseload" (IDEX)
- IDEBQ = Future on the quarterly contract "Baseload" (IDEX)
- IDEBY = Future on the yearly contract "Baseload" (IDEX)
- IDEPM = Future on the monthly contract "Peakload" (IDEX)
- IDEPQ = Future on the quarterly contract "Peakload" (IDEX)
- IDEPY = Future on the yearly contract "Peakload" (IDEX)
- DWHEAT = Future on durum wheat (AGREX)
- In addition, all the underlying "Tickers" for stock futures and options traded on IDEM Equity such as G (Assicurazioni Generali) and T (Telecom Italia ordinarie).
 - For Single Stock Dividend Futures, a "1" is preceding the Underlying "Ticker", e.g. 1G for Assicurazioni Generali.
 - For Stock Futures cash settled, a "2" is preceding the Underlying "Ticker", e.g. 2TIT for Telecom Italia ordinarie.
- For Weekly MIBO and Weekly Stock Options:
 - First week: "1W" follows the Underlying "Ticker", e.g. BMPS1W.
 - Second week: "2W" follows the Underlying "Ticker", e.g. MIBO2W.
 - Third week: "4W" follows the Underlying "Ticker", e.g. ENI4W.
 - Fourth week: "5W" follows the Underlying "Ticker", e.g. TIT5W.

The [month] code is assigned according to the following table:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Futures (1) and call options	A	B	C	D	E	F	G	H	I	J	K	L
Put Options	M	N	O	P	Q	R	S	T	U	V	W	X
Quarterly power futures (IDEX)	..	..	1	..	..	2	..	..	3	..	..	4

(1) With the exception of IDEX's quarterly power futures.

Some examples related to the IDEM Series Names are reported below.

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Examples for the “IDEM Equity” segment

— Call option on the FTSE MIB index, expiry October 2015 @ strike=23.000 (index points)

→ Seriesname: MIBO5J23000

#	Code	Description
[root]	MIBO	Option on the FTSE MIB Index
[year]	5	Call expiry : October 2015
[month]	J	
[strike]	23000	Strike Price: 23.000 index points

— Put option on the FTSE MIB index, expiry October 2015 @ strike=23.000 (index points)

→ Seriesname: MIBO5V23000

#	Code	Description
[root]	MIBO	Option on the FTSE MIB Index
[year]	5	Put expiry : October 2015
[month]	V	
[strike]	23000	Strike Price: 23.000 index points

— Future on the FTSE MIB index, expiry March 2015

→ Seriesname: FIB5C

#	Code	Description
[root]	FIB	Future on FTSE MIB Index
[year]	5	Expiry : March 2015
[month]	C	

— Call option on Eni S.p.A., expiry April 2015 @ strike=100 euro

→ Seriesname: ENI5D100

#	Code	Description
[root]	ENI	Underlying: ENI
[year]	5	Call expiry : April 2015
[month]	D	
[strike]	100	Strike Price: €100

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- Put option on Eni S.p.A., expiry April 2015 @ strike=100 euro
→ Seriesname: ENI5P100

#	Code	Description
[root]	ENI	Underlying: ENI
[year]	5	Put Expiry: April 2015
[month]	P	
[strike]	100	Strike Price: €100

- Stock future on Eni S.p.A., expiry June 2015
→ Seriesname: ENI5F

#	Code	Description
[root]	ENI	Underlying: ENI
[year]	5	Expiry: June 2015
[month]	F	

Examples for the IDEX segment

Yearly "baseload" contract, expiry December 2015 → Seriesname: IDEBY5L

#	Code	Description
[root]	IDEBY	Underlying: yearly "baseload" Contract
[year]	5	Expiry December 2015
[month]	L	

- Monthly "baseload" future contract, expiry March 2015
→ Seriesname: IDEBM5C

#	Code	Description
[root]	IDEBM	Underlying: monthly "baseload" Contract
[year]	5	Expiry March 2015
[month]	C	

- Quarterly "Peakload" future contract, expiry March 2015

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→ Seriesname: IDEPQ51

#	Code	Description
[root]	IDEPQ	Underlying: quarterly "Peakload" contract
[year]	5	First quarter 2015
[quarter]	1	

Examples for the AGREX segment

— Future on the Durum Wheat contract, expiry March 2015

→ Seriesname: DWHEAT5C

#	Code	Description
[root]	DWHEAT	Underlying: Durum wheat
[year]	5	Expiry: March 2015
[month]	C	

Strategies

SOLA supports trading of combinations of Series of Standard Contracts ("Strategies") on the IDEM market. In a Strategy, several orders on different Series are jointly entered, to be jointly executed in case market conditions at the same time satisfy the order parameters for all the Series included in the Strategy.

From a regulatory perspective, Strategies represent a specific Order Type (see art. 5.3.2, comma 6b and 6d of the Market Rules).

From a technical perspective, Strategies are implemented in SOLA as a single Instrument Series ("Strategy Series"). For this reason, Strategy Series have their own order book and can be bought or sold like any other Series.

Strategies are available on the IDEM Equity segment only. Available Strategies are defined by Borsa Italiana in the Instructions accompanying the Rules (art. IA.9.2.5).

Strategies available on IDEM market belong to the following two Strategy Categories:

1) Standard Combinations

These Standard Combinations represent pre-determined combinations of Series of Standard Contracts.

With regard to Standard Combinations, only Time Spreads on the FTSE MIB Future, FTSE MIB Mini Future, FTSE MIB Dividend Future, Stock Future and Single Stock Dividend Future are currently available. Time Spreads are a combination of two orders with opposite direction (one buy, one sell) to be jointly executed, for the same quantity, on different expiries.

The SeriesName for Standard Combination (time spreads) Series is defined according to the following naming scheme:

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[root]	[year long leg]	[month long leg]	[flag of Time spread]
--------	-----------------	------------------	-----------------------

Where:

1. [root] = Product/Underlying code, max. 6 chars (e.g. FIB for FTSE MIB futures, ENI for futures/options on ENI S.p.A.)
2. [year long leg] = 1 char, representing the expiry year of the first leg of the strategy (long position);
3. [month long leg] = 1 char, representing the expiry month of the first leg of the strategy (long position) (from A to L);
4. [flag of Time spread] = 1 char, representing the flag of Standard Combinations (T).

— Time spread on FTSE MIB Index future (long June 2015, short March 2015)

→ Seriesname: FIB5FT

#	Code	Description
[root]	FIB	Underlying: FTSE MIB Index
[year long leg]	5	Expiry of the first leg of the strategy (long position): June 2015
[month long leg]	F	
[flag of Time spread]	T	Flag for Standard Combinations

2) User Defined Strategy (FLEXCO)

Flexible Combinations ("FLEXCO") represent personalized combinations of Series of Standard Contracts. Member Firms can individually determine the Series included in a FLEXCO, subject to the following limitations:

- the maximum number of FLEXCO legs is equal to two;
- Series within the same FLEXCO order must have the same contract size;
- FLEXCO are not allowed on futures;
- the maximum ratio that can be associated to a single leg is 100

Orders on a FLEXCO that coincide with an existing Standard Combination or with a pre-existing FLEXCO will be directed to the order book of the existing Strategy.

A participant can request the creation of a user defined strategy (FLEXCO) by submitting a New Instrument (ON) message. A strategy creation request must include the following information for each of the legs:

- Verb
- Ratio
- Group ID
- Instrument ID

Strategy Creation requests can be accepted, accepted with modifications or rejected.

There are two reasons why a strategy creation request can be accepted with modifications:

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The Strategy Ratio can be reduced to the least common denominator.

For example a participant requests the creation of a 2 leg strategy where the ratio is 2 on the first leg and 2 on the second leg. During the creation of the strategy the ratio is rounded down to 1.

The leg verbs are reversed.

For example, a participant sends a creation request with the instruction to Sell leg A and to Buy leg B. During the strategy creation process the strategy created can be Buy leg A and Sell leg B. An acknowledgement message is always provided to the customer

The SeriesName for FLEXCO is defined according to the following naming scheme:

[root]	[identification code]	[identification group]	[identification number]
--------	-----------------------	------------------------	-------------------------

Where:

1. [root] = Product/Underlying Ticker, max. 6 chars (e.g. FIB for FTSE MIB futures, ENI for futures/option on ENI S.p.A.)
2. [identification code] = 4 chars, equal to “_FC_” (FLEXCO identification code);
3. [identification group] = 2 chars, Instrument Group ID
4. [identification number] = a unique incremental identifier by instrument group assigned to the FLEXCO series (4 chars)

Here following an example of the SeriesName for a FLEXCO:

- FLEXCO on ENI Index
→ Seriesname: ENI_FC_XXxxxx

#	Code	Description
[root]	ENI	Underlying Ticker
[identification code]	_FC_	FLEXCO identification code (FC)
[identification group]	XX	Instrument Group ID
[identification number]	xxxx	Unique number per instrument group assigned automatically by the system when the FLEXCO is created

3.2 Trading Phases

Available Trading Phases for the IDEM market are defined in Market Rules (art. 5.3.1) and in the Instructions to Market Rules (art. IA.9.2.2). Table 1 presents a summary of the Trading Phases of the IDEM market.

Table 1 – Trading Phases for IDEM Equity / IDEX / AGREX

Trading Phase		Time interval	IDEM Equity Segment - FTSE MIB Futures and FTSE MIB Mini Futures	AGREX Segment	All other Contracts
Opening Auction	Pre-Opening	8:30am-9:00am ¹	Yes	No	No

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Trading Phase	Time interval	IDEM Equity Segment - FTSE MIB Futures and FTSE MIB Mini Futures	AGREX Segment	All other Contracts	
	Validation	Immediate ²	Yes	No	No
	Opening	Immediate ²	Yes	No	No
Continuous Trading ³	9:00am-5:40pm	Yes	-	Yes	
	2:30pm-5:40pm	-	Yes	-	

¹ Refers to a randomly selected second between 9:00 and 9:00:59 am.

² Immediately after the end of the previous Trading Phase.

³ Starts immediately after the end of the Opening Phase.

Trading Phases are implemented in the SOLA system by associating, in each moment of the trading day, an appropriate Instrument Group State (4.3) to each Instrument Group.

Each Instrument Group State permits to perform only certain actions on the associated Instrument Series (e.g. order entry, order cancellation). A detailed description of the available Instrument Group and Instrument Series States and of their associated actions is provided in paragraphs 4.1 and 4.2.

3.3 Order Types

The following Order Types are supported by the SOLA system for the IDEM market (see Market Rules, art. 5.3.2, paragraph and paragraph 5.1 for a full description of the Order Types and Order Parameters available in the IDEM Trading System):

1. Single Orders: represent an order to buy or sell a Standard Series. Single Orders can be submitted:
 - a. as limit or market orders;
 - b. with specific quantity parameters (e.g. minimum quantity and iceberg orders);
 - c. with specific time validity parameters (e.g. Good Till Day, Good Till Cancelled);
 - d. as Stop Orders;
 - e. as Trade Reports, to be executed between 2 pre-determined counterparts (Committed Cross Orders) or within the same bank (Internal Cross Orders).
2. Quotes: available to Market Makers and Specialists only;

Strategy Orders: represent an order to jointly execute one buy or sell orders for each Series included in a Standard Combination or in a FLEXCO.

Note: a Request for Quote can be submitted by any member.

Order entry of a single order, a FLEXCO or a Standard Combination is managed through the same message type.

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3.4 Tick sizes

Prices on IDEM instruments can vary change according to the ticktable summarised below. For details, refer to the Instructions to Market Rules, Idem Section.

The ticktables can be downloaded using the J/JF/JS message of the HSVF protocol.

IDEM Equity - Index Instruments

Short Name	Instrument Type	Tick
IF	FTSE MIB Futures	5
	FTSE MIB MINI Futures	5
IO	FTSE MIB Options (depending on premium value)	1 (1 - 99)
		2 (100 - 498)
		5 (\geq 500)
IW	FTSE MIB Weekly Options	1
DV	FTSE MIB Dividend Futures	1
MF	FTSE100 MINI Future	0,5

IDEM Equity - Stock Instruments

Short Name	Instrument Type	Tick
EF	Stock futures	0,0001
	Pan European Stock Futures	0,0001
EO	Stock options	0,0005
	Weekly stock options	
DF	Single Stock Dividend Future	0,0001

IDEX Instruments

For all Market Makers categories, the obligations in terms of quantity and spread are set in the Instructions.

Short Name	Instrument Type	Tick
XF	IDEX futures	0,01

AGREX Instruments

Short Name	Instrument Type	Tick
AG	AGREX futures	0,25

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3.5 Traders

A Trader is a group of market operators (eventually limited to one single person only) entitled to have access to IDEM trading functionalities. Each Trader is assigned a unique identification code (Trader ID). Traders may use any User of the Member Firm to which they belong.

Member Firms can apply to perform the role of Market Maker or Specialist on IDEM.

Market Makers and Specialists are subjected to specific quoting obligations for minimum quantities and on defined group of Instrument Series and are provided specific pricing schemes for their trading activity. Supervision regarding Market Makers and Specialists' activities and fulfilment of their obligations is carried out by Borsa Italiana's Markets Supervision Department in real-time, through special functions implemented on the IDEM Trading System and, subsequently, through the processing of dedicated indicators.

The following categories of Market Makers and Specialists are available for IDEM. For full details on Market Makers' and Specialists' obligations, please see the Instructions to Market Rules (IA9)

Role		Obligations
Market Makers	Primary	continuous quoting obligations, on proprietary account
	Market Makers	answer to Request for Quotes, on proprietary account
	Liquidity Providers	continuous quoting obligations, on proprietary account and on a reduced number of underlying and expirations (or of days in the AGREX segment) in comparison with Primary Market Makers
	Designated Market Maker	continuous quoting obligations, on proprietary account
Specialists	Primary	continuous quoting obligations, on agency account, on a reduced number of underlying and expirations (or of days in the AGREX segment), in comparison with Primary Market Makers
	Specialists	answer to request for Quotes, on agency account
	Liquidity Providers	continuous quoting obligations, on agency account and on a reduced number of underlying and expirations in comparison with Primary Market Makers
	Designated Specialist	continuous quoting obligations, on agency account

4.0 Market Structure

IDEM Equity, IDEX and AGREX reference data are organised in Instrument Series and Instrument Groups. Their status can be modified due to the scheduled trading phases changes or due to manual intervention as described in the following paragraphs.

4.1 Instruments Series

An Instrument represents an individual Series in the SOLA system.

An Instrument Series is identified by its Instrument Series ID and the Instrument Group ID of the Instrument Group to which it belongs (see paragraph 4.1.2). An Instrument Series ID is represented by a 4-digits code that is unique within the Instrument Group to which the Instrument Series belongs.

HSVF Summary messages (N/NF/NS) allow downloading the list of reference data for the IDEM market. A specific summary message is available for each instrument type.

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Summary messages will be sent:

- At the beginning of the day to define the instruments traded on that day;
- After a trade cancellation if extreme values have been changed (Open/High/Low/Last);
- At the end of the day with relevant data such as the Open/High/Low/Last/Volume and closing prices calculated by the clearing house (only for N)
- During the day if a new instrument is added.

A summary message (options/futures/futures options/strategy) is sent following a trade cancellation. A summary message is also sent each day at the start of the day in order to provide a list of instruments (options/futures/futures options/strategy) which will be traded each day. At that point, all price fields, with the exception of open interest will contain zero values. Any summary sent after the BEGINNING OF (options/futures/futures options/strategy) SUMMARY message (with Message Type = Q) contains the list of trading instruments for the day (sent prior to market opening) or the summaries after the close of the market for London Stock Exchange instruments.

4.2 Instrument Groups

An Instrument Group is a set of Instruments Series governed by the same trading rules, according to the Rules and Instructions to Market Rules defined by Borsa Italiana. Each Instrument Group is identified by an Instrument Group ID.

The list of the Instrument Groups and Instrument Group ID can be retrieved via HSVF protocol.

4.3 Instrument Group States

Each Instrument Group is associated, in each moment of the day, to a specific Instrument Group State. Available Instrument Group States are reported below. Instrument Group States from 1 to 8 are associated to pre-defined time intervals during the daily trading session. Time intervals for Group Status from 2 to 5 correspond to the time intervals for the Trading Phases defined by Borsa Italiana in the Instructions to Market Rules. The "Interrupted" and "Forbidden" Instrument Group States are activated manually by Borsa Italiana under specific circumstances. Each Instrument Group State is described below:

- | | |
|--|-----------------------------|
| 1. Start of Consultation | (7:30am-8:00am) |
| 2. Intervention Before Opening (or "Order Cancellation") | (8:00am-8:30am) |
| 3. Pre-Opening | (8:30am-9:00:2am) |
| 4. Opening | immediate ³ |
| 5. Continuous Trading | (9:00:4am-5:40pm) |
| 6. Exchange Intervention | (5:40pm-6:10pm) |
| 7. End of Consultation | (6:10pm-7:00pm) |
| 8. Mini Batch | (7:00pm-End of Trading Day) |
| 9. Forbidden; | |
| 10. Interrupted. | |

SOLA notifies all clients when an Instrument Group switches to a different Instrument Group State. This is done by sending a GROUP STATUS CHANGE NOTICE message indicating the Instrument Group ID and the Instrument Group's new State:

- SAIL: message NG

² 9:00am refers to a randomly selected second between 9:00-9:00:59am.

³ This State is activated just after the end of the Pre-Opening Trading Phase.

⁴ Refers to the end of the Opening Phase. On AGREX continuous trading phase starts at 2:30pm.

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- FIX: message NG
- HSVF: messages GR, GS and GC.

In the event that trading is interrupted for the whole IDEM market, clients will receive one INSTRUMENTS GROUP STATUS CHANGE NOTICE for each Instrument Group.

Start of Consultation (7:30-8:00am)

SOLA does not notify clients of the switch of Instrument Groups to the "Start of Consultation" State.

No action is available to Market Members on Instrument Groups in "Start of Consultation" State

Data regarding Borsa Italiana's interventions during this Phase are broadcast to Member Firms and data vendors via HSVF.

Instrument Groups assume the "Start of Consultation" State from 7:30am to 8:00am. Only Borsa Italiana can operate on Instrument Groups assuming the "Start of Consultation" State. During such Phase, Borsa Italiana is allowed to perform actions on Instrument Series scheduled to become effective starting from the forthcoming trading day (e.g. reserve instruments). Order entry is not allowed. However, Borsa Italiana can perform order deletions for a specific Instrument Series or global deletions of a specific Member Firms' orders.

Intervention Before Opening (Order Cancellation) (8:00am-8:30am)

SOLA notifies all clients via HSVF with one message for each Instrument Group that switches to the "Intervention Before Opening" State.

For Instrument Series in "Intervention Before Opening" State, Member Firms are only allowed to cancel orders (see Table 1 – Trading Phases for IDEM).

Data is broadcast to Member Firms and data vendors via HSVF.

Instrument Groups assume the "Start of Consultation" State from 8:00am to 8:30am. In addition to cancellations performed by Market Members, the system automatically cancel long orders having prices that are not consistent with the order price threshold parameters. Order cancellations performed during this Phase are broadcast to orders' owners via HSVF and SAIL/FIX.

Pre-Opening (8:30am-9:00am⁵)

SOLA notifies all clients via HSVF with one message for each Instrument Group that switches to the "Pre-Opening" State.

Data is broadcast to the public, to Member Firms and to CC&G.

During this Phase, Member Firms are allowed to enter, modify and cancel orders and quotes. Internal/committed cross orders and strategies are not available (see Table 2).

Instrument Groups assume the "Pre Opening" State from 8:30am to a randomly selected second between 9:00am and 9:00:59am. Orders entered during this Phase contribute to the calculation of the Theoretical Opening Price ("TOP"). No trade execution is performed during this Phase.

⁵ 9:00am refers to a randomly selected second between 9:00am-9:00:59am.

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Theoretical Opening Price calculation

The Theoretical Opening Price (TOP) calculation is calculated and disseminated in real-time on a daily basis during the Pre-Opening phase, as follows (see Market Rules, art. 4.7.6, comma 1):

Step 1: Maximisation of traded volume

The TOP is the price at which it is possible to trade the highest number of contracts.

Step 2: Minimisation of surplus

If there are several prices available after Step 1, the TOP will equal to the price that leaves the minimum non-tradable quantity in the book, in relation to both buy and sell orders with prices equal or better than the TOP.

Step 3: Minimisation of variation against the last traded price/reference price

If there are prices left after Step 2, and several of these prices are left without a surplus, Step 3 will define a tradable price range (see Section 8.1) and determine the TOP within that range, minimizing the variation against the last traded price if available or the reference price if the last trade price is not available.

Management of the tradable price range:

If multiple prices are left after Step 2, the system defines a range of valid opening prices according to the following rules

If the market unbalanced quantity includes market order, the range is set at the best limit order on the same side up to the instrument limit price. Note the price must respect Step 1 and 2. If the same side best limit order price does not maximize the traded volume or minimize the unfilled quantity then the TOP range starts at the first price meeting step 1 and 2 criteria.

Range determination when unbalanced includes limit order:

If buy is the unbalanced side then the range lower boundary is determined with the highest buy limit order that would remain unfilled at TOP price (included in the unbalanced quantity).

If sell is the unbalanced side then the range higher boundary is determined with the lowest sell limit order price that would remain unfilled at TOP price (included in the unbalanced quantity).

If at opening, an instrument has no last trade price and no reference price or it is set to 0 and the Pre-Opening book shows only market orders on both sides, the instrument state will be set to reserved.

The following example illustrates the definition of a price range:

Reference Price €1.25					
Order Book during pre-opening phase					
Buy			Sell		
Order #	Quantity	Price	Price	Quantity	Order #
1	100	MKT	€1,05	50	1
2	50	€1,00			

- The initial price range is €1.05 (Order 1 on the Sell side) to infinite (the MKT order on the Buy side).
- The engine validates the price if the reference price is located within the range.
- If the reference price is €1.25, the opening price will be set at €1.25

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- The remaining quantity of the market order will be booked at €1.25

Opening (immediate, at end of the Pre-Opening Phase)

SOLA notifies all Member Firms and data vendors [via HSVF] with one message for each Instrument Group that switches to the "Opening" State.

This Phase is available only for FTSE MIB Futures and FTSE MIB Mini Futures (see Table 1).

At the end of the "Pre-Opening" Phase, trades for each Instrument Series are executed at the last TOP price, if such TOP is considered valid according to price limit variations described in paragraph (the "Opening Price"). Otherwise, a volatility auction is started with the Instrument Series assuming the Instrument Series Status "Reserved".

Continuous Trading (9:00am⁶-5:40pm)

SOLA notifies all Member Firms and data vendors [via HSVF] with one message for each Instrument Group that switches to the "Continuous Trading" State.

Instrument Groups assume the "Continuous Trading" State from the end of the Opening Phase to 5:40pm. Orders are associated and trades executed in real-time, following Price-Time priority rules (according to Art. 4.7.5 of the Market Rules).

All actions on orders (including internal/committed cross orders) and quotes (including Request for Quotes) are available to Market Members on Instrument Groups in "Continuous Trading" State (see Table 2).

The following information are sent by the trading system to the CC&G clearing system and showed in the BCS:

- Information of the executed trades
- request for early exercise/by exception (sent to the CC&G clearing system through the BCS)
- information on intraday margin calls (available through the BCS).

Exchange Intervention (5:40pm-6:10pm)

Instrument Groups assume the "Exchange Intervention" State from 5:40pm to 6:10pm.

Participants may receive certain messages during this phase (e.g. Group or Instrument State change notices).

No action is available to Market Members on Instrument Groups in "Exchange Intervention" State. Borsa Italiana is entitled to perform Order cancellations (see Table 2).

End of Consultation (6:10pm-7:00pm)

No data information is broadcasted.

Instrument Groups assume the "End of Consultation" State from 6:10pm to 7:00pm. This phase is reserved for Borsa Italiana for the purposes of managing the system.

Market Members are entitled to perform Order cancellations (see Table 2) when the Instrument Group is in "End of Consultation" State.

⁶ Refers to the end of the Opening Phase. On AGREX continuous trading starts at 2:30pm.

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Mini Batch (7:00pm- End of Trading Day)

Instrument Groups assume the "Mini Batch" State from 7:00pm to the End of the Trading Day (technical phase). Orders whose validity date has expired are deleted. Statistics for each Instruments Series are automatically reset by the system (high, low, volume). Notifications of expired orders are sent to Member Firms. Since Member Firms are not typically connected during this phase, such messages are available upon next connection.

No action is available on Instrument Groups in "Mini Batch" State (see Table 2).

Forbidden

SOLA notifies all Member Firms and data vendors [via HSVF] with one message for each Instrument Group that switches to the "Forbidden" State.

Data is broadcast to the public, to Member Firms via HSVF or GTP and to CC&G

Order cancellation is the only available action on Instrument Groups in "Forbidden" State (see Table 2).

Instrument Groups are manually set to the "Forbidden" State by Borsa Italiana. An Instrument Group State change to "Forbidden" can occur at any time during the trading day and is normally used when an Instrument Group is permanently de-listed.

Interrupted

SOLA notifies all clients Member Firms and data vendors [via HSVF] with one message for each Instrument Group that switches to the "Interrupted" State.

No action is available on Instrument Groups in "Interrupted" State (see Table 2).

Instrument Groups are manually set to the "Interrupted" State by Borsa Italiana. A Instrument Group State change to "Interrupted" can occur at any time during the trading day and is normally used when an Instrument Group is deliberately shut down for a technical or business emergency.

4.4 Instrument Series States

The normal behaviour of an Instrument Series is to follow the rules of its Instrument Group according to the active Instrument Group State.

Under specific circumstances, Borsa Italiana can assign an Instrument Series a specific Instrument Series State, independently by its Instrument Group.

The following Instrument Series States can be in place during the trading day:

- Normal: it follows the trading rules associated to the Instrument Group it belongs;
- Forbidden: no trading activities are available. No action on Orders, Quotes and Strategies is available;
- Reserved: this Instrument Series State is automatically activated in case the Opening Price cannot be determined or it is not valid or on specific circumstances following a decision by Borsa Italiana;
- Suspended: this Instrument Series State is automatically activated in case a Circuit Breaker is triggered.

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When an action affects an Instrument Series modifying its Instrument State, SOLA sends all clients an INSTRUMENT STATE CHANGE NOTICE (NI) message specifying, amongst other parameters, the new Instrument Series Status of the Instrument Series, as well as the type of action which triggered this change.

Table 2 summarises the actions allowed under each Instrument Group State and each Instrument Series State.

Table 2 - Allowed actions, by Instrument Group State and Instrument Series State

		Orders				Quotes			Strategy		
		Entry	Modify	Cancel	Cross/ committed	Entry	Modify	Cancel	Creation	Order and cross order entry	
Standard schedule (for Instrument Groups)											
-	Start of Consultation	7:30am-8:00am	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Intervention Before Opening	8:00am-8:30am	NO	NO	YES ³	NO	NO	NO	NO	NO	NO
-	Pre-Opening	8:30am-9:00 ⁽¹⁾ am	YES	YES	YES	NO	YES	YES	YES	NO	NO
-	Opening	Immediate	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Continuous Trading	9:00am-5:40pm	YES	YES	YES	YES	YES	YES	YES	YES	YES
-	Exchange Intervention	5:40pm-6:10pm	NO	NO	YES	NO	NO	NO	NO	NO	NO
-	End of Consultation	6:10pm-7:00pm	NO	NO	YES (3)	NO	NO	NO	NO	NO	NO
-	Mini Batch	7:00pm-End of Trading Day	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Post Trading										
Exceptional states:											
(for Instrument Groups)											
-	Interrupted		NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Forbidden		NO	NO	YES (2)	NO	NO	NO	NO	NO	NO
(for Instrument Series)											
-	Forbidden		NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Reserved		YES	YES	YES	NO	YES	YES	YES	NO	NO
-	Suspended		NO	NO	YES (3)	NO	NO	NO	YES (3)	NO	NO

(1) 1 minute Random from 9:00:00am to 9:00:59am, not valid Opening Price may cause volatility auction

(2) Reserved to Borsa Italiana

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(3) Available for Customer

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The following diagrams describe the behaviour of an Instrument Series when an Instrument Series State is set independently from the corresponding Instrument Group State.

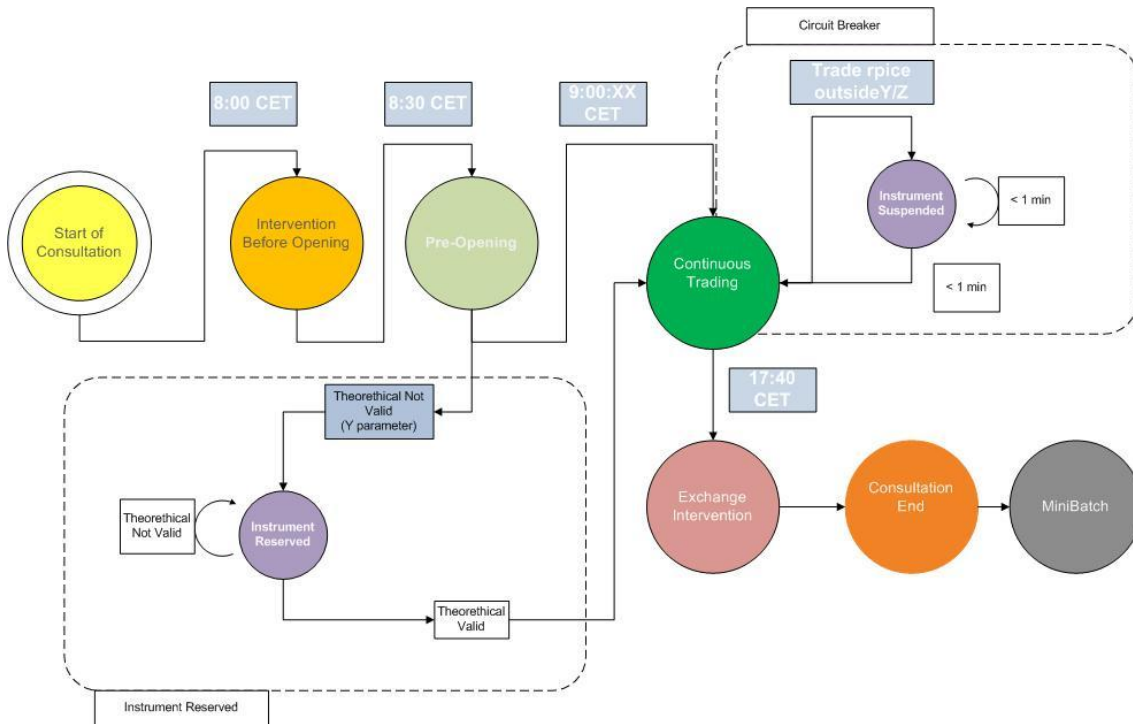


Figure 2 Status changes diagram (for series with Opening Auction)

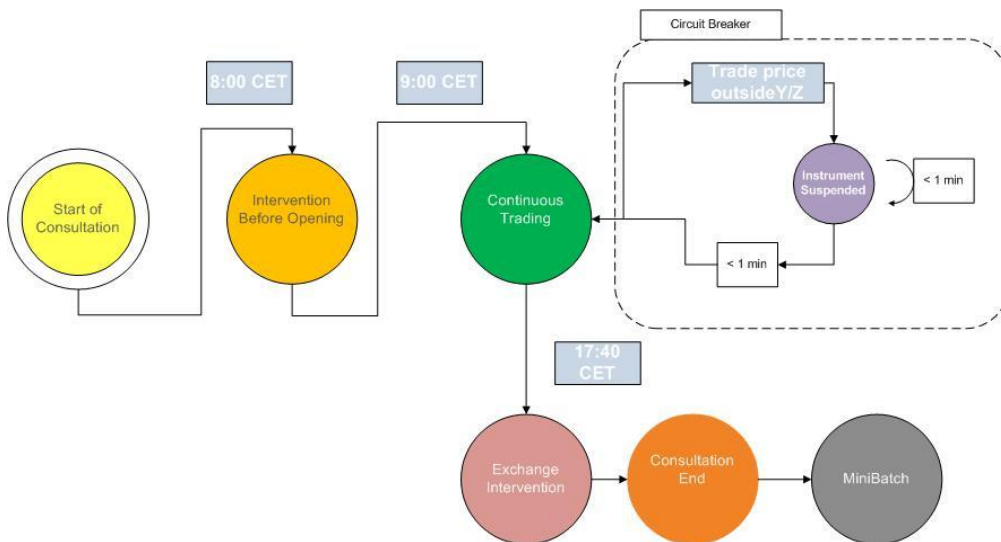


Figure 3 Status changes diagram (for series without Opening Auction)

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Strategies' Instrument Series State

Instrument Series State for Strategy Series is dependent on the Instrument Series State of its legs.

If any of the legs of the Strategy Series is placed in a not trading State, the IDEM Trading System automatically places the Strategy Series' Instrument Series State to "Suspended".

The Strategy Series' Instrument Series State will return to follow the State of its Instrument Group (so, returning to the value "Continuous Trading") when the same switch will have happened for all of its legs (so, when the Instrument Series State for of its legs returned to "Continuous Trading").

4.5 Strike generation rules

The system automatically manages the updating of the Series of option Contracts available for trading on IDEM, according to The Instruction of the Market Rules (art. IA.9.1).

Here follow the current strike generation rules:

- At the close of the session on the Expiration Date, the series of the new expiration to be quoted starting from the first subsequent Borsa Italiana open day are generated;
- Every day the new strike prices are generated (i.e. the new single series) according to the fluctuation of the index last value (for FTSE MIB index Options) or the stock Reference Price (for stock Options), whenever:
 - For call options, it is higher (lower) than the average value of the at the money price and the first out of (in) the money price;
 - For put options, it is higher (lower) than or the average value of the at the money price and the first in (out of) the money price;

All the strike prices generated remain visible (and tradable) in the trading system until the expiration date even if no orders are entered on the days following their generation.

In particular, the negotiable series are:

- The central Strike Price level, defined as "at the money", or the strike price nearest the value of the underlying stock;
- N Strike Price levels higher than at the money;
- N Strike Price levels lower than at the money;

Currently for FTSE MIB index option contracts, for each series up to one year (monthly and quarterly) there are 15 price levels with interval of 250 or 100 index points and 500 index points for the following series; at least 21 price levels with interval of 1000 index points for the series with remaining life longer than one year. For the weekly FTSE MIB index options contracts there are 21 price levels with interval of 100 index points.

For stock options contracts for each series up to one year (monthly and quarterly) there are at least 15 price levels available on the calls and the put, and at least 21 price levels for the series with remaining life longer than one year. For the weekly stock option contracts there are 21 price levels.

When the Reference Price approaches the limit of a strike interval, the system generates new strike prices using the new step, in order to keep the ratio between the incremental step and the strike value constant.

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4.6 Adjustment of stock option, futures and single stock dividend futures contracts

The adjustment of stock option, single stock dividend futures and stock futures contracts is due in case of corporate actions (e.g. extraordinary dividend payment). The events and the criteria for the adjustments are defined by Borsa Italiana in the Corporate Action Policy.

The new adjusted series are generated by the clearing system that sends the data to the trading system; the new series are identified by:

- an "X" at the end of their name if it is the first adjustment, an "Y" or "Z" for the following adjustments; for additional adjustments the following letters are used: "Q", "R", "S", "T", "U", "V".
- the valorisation of a suitable indicator in the static information flow exchanged with CC&G.

Ahead of the adjustment, the system automatically cancels the existing orders related to the series that will be no longer tradable on the days following the adjustment.

The adjusted strike prices related to the maturity tradable on the ex-day will not respect the standard steps: the correct strike prices will have their own "K" factor as a result of the adjustment after the Corporate Action.

In case of both the introduction of an expiration and the shifting of the Reference Price, the new automatically generated series will have all the characteristics defined for the standard futures contract to which they refer to (steps, number of underlying shares, etc.).

The electronic system allows the co-existence of corrected series (until their expiration) and series generated according to the normal procedures, both for the same expiration and for different expirations.

5.0 Orders Management

5.1 Order Entry

The IDEM Trading System assigns a unique identification number to each order ("Order ID") at order entry. Such Order ID is unique by Instrument Series and by day, and it is recorded along the life of the order, following order modifications and up to trade execution or cancellation. This way, the entire history of any order entered into the IDEM Trading System is traced and can be reconstructed, when necessary.

Order Entry is performed by Member Firms through the ORDER ENTRY (OE) message. The OE message is used both for Standard Series, Strategy Series, with the sole exception of Cross Orders (OX Message).

To enter an order, the client sends an ORDER ENTRY (OE) message. This message will contain the Client's User Sequence ID.

SOLA performs validation on the parameters of the ORDER ENTRY (OE) message received.

If validation fails, SOLA sends an ERROR MESSAGE (ER/TE) rejecting the message received and indicating the code for the first error detected and the message type for the message generating the error along with its User Sequence ID.

If validation is successful, SOLA accepts the message received and populates an Order ID to the order entered. This ID is unique by instrument and by day. SOLA sends the client an acknowledgement for the order entered via an ORDER ACKNOWLEDGEMENT (KE) message. The ORDER ACKNOWLEDGEMENT message will contain the unique Order ID. It also contains the User Sequence ID which enables the client to reconcile the acknowledgment to the original message entered.

An ORDER ACKNOWLEDGEMENT indicates that the order has been:

- Entered on the order book (Status= " ", a part of the order having possibly been executed)

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- Eliminated (Status= E)
- Executed in full, or Partially for IOC orders (Status= X)

If an order is either partially or fully executed, the client receives, immediately after the ORDER ACKNOWLEDGEMENT (KE) message, one or several EXECUTION NOTICE (NT) messages providing additional information related to the transaction that took place.

If the order was on a strategy instrument, the client also receives LEG EXECUTION NOTICE (NL) messages providing additional information related to the price and quantity at which each of the individual legs of the strategy instrument traded.

If the order has been booked, the client will automatically receive at a later time one of the following messages:

One or more EXECUTION NOTICE (NT) messages.

In the case of a strategy: several LEG EXECUTION NOTICE messages (NL) in addition to the EXECUTION NOTICE. Each NL message can be linked to its parent strategy trade (EXECUTION NOTICE (NT) on the strategy instrument) message by the 'Strategy Instrument ID', 'Strategy Group' and 'Strategy Trade Number' fields.

An ORDER ELIMINATION (NZ) message.

All messages related to an order (execution notice, cancellation notice, order acknowledgement) contain the current Order ID and the Original Order ID. The User Sequence ID is set to zeroes.

The following parameters must be specified in the ORDER ENTRY:

Table 3 - Available Parameters in the Order Entry message

Parameter	Available values	Comments
- Instrument Series ID		Instrument identification within a Group and Group ID
- Price Type	Limit; Market; Top; Committed	Refer to paragraph 5.1.1
- Price		To be defined if the Price Type is set to "Limit" or "Committed". Refer to paragraph 5.1.2
- Quantity		Number of contracts or shares
- Minimum Quantity (Group)		Includes 2 sub-fields. Refer to paragraph 5.1.3
Quantity Term	Minimum; Disclosed	(Optional)
Additional Quantity		(Optional). To be defined only when the Quantity Term is set to "Minimum" or "Disclosed"
- Time Validity	Day; Good Till Day; Good Till Cancellation; Immediate; Good Till Connected	Refer to paragraph 5.1.4
- Stop (Group)		For Stop Orders only. Refer to paragraph 5.1.5
Stop Price		(Optional)
Special Price Term	Stop; Stop on Bid; Stop on Ask; If Touched; If Touched on Bid; If Touched on Ask	(Optional)
- Clearing Data (Group)		Includes 3 sub-fields. Refer to paragraph 5.1.6
Position	Open; Close	
Account Type	House; Third Party	
Client Code		

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Parameter	Available values	Comments
-	Owner data	(Optional). A free-text field (max. 50 characters) Available to Member Firms as a reference to the order. Refer to paragraph 5.1.7

The following paragraphs describe the function of the available parameters for the ORDER ENTRY (OE) message, and how orders are managed within the IDEM Trading System in relation to the available combinations of such parameters.

Price Type parameter

The following values can be specified for the "Price Type" parameter:

- "L": for Limit Orders;
- "O": Opening;
- "W": for Market Orders;
- "M": for Top Orders⁷ (or "At Best Opposite Price");
- "C": for Committed Orders⁸.

Limit Orders

Limit Orders are submitted by setting the Price Type field of ORDER ENTRY (OE) message to "L".

Limit Orders entered into the order book are executed at the indicated price or at a better price, if compatible orders are available on the opposite side of the order book. Unless the Time Validity Parameter of the Limit order is set to "Immediate", the residual volume after a partial execution of a Limit Order is retained on the order book, until it is withdrawn or traded.

Limit Orders can be entered on Instrument Series in "Pre-Opening" or "Continuous Trading" State.

Limit Orders entered during the "Pre-Opening" Trading Phase are executed at the Opening Price – if possible, according to the procedure described in chapter Theoretical Opening Price calculation – during the "Opening" Trading Phase. Unexecuted (partially or completely) Limit Orders at the end of the "Opening" Trading Phase, unless the Time Validity Parameter of the Limit order is set to "Immediate" (IOC), are automatically transferred to the "Continuous Trading" Trading Phase, maintaining their original Price and time priority. In case the Time Validity Parameter of the Limit order is set to "Immediate" (IOC), the unexecuted quantity is cancelled.

Market Order

Market Orders are submitted by setting the Price Type field of the ORDER ENTRY (OE) message to "W".

Market Orders are executed against all the available orders on the opposite side of the order book, ordered by price-time priority, until: i) the total quantity of the Market Order has been traded, or; ii) until all the available volume on the opposite side of the order book has been traded.

In case of partial execution of the Market Order (happening when all the volume on the opposite side of the order book has been traded) and unless the Time Validity Parameter of the Limit order is set to "Immediate" the residual Quantity of

⁷ From a regulatory perspective, a Top Order is a Market Order with a particular execution algorithm.

⁸ Cross Orders are executed with a specific message type ("OX"). See paragraph 5.1.4.

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the Market Order is automatically converted to a Limit Order, at the last price at which the traded part of the Market Order has been executed.

Market Orders can be entered during the "Pre-Opening" and "Continuous Trading" Trading Phase.

Market Orders entered during the "Pre-Opening" Trading Phase are executed at the Opening Price if possible, during the "Opening" Trading Phase. Unexecuted (partially or completely) Market Orders, unless the Time Validity Parameter of the Limit order is set to "Immediate" (IOC), are converted to Limit Orders at the Opening Price and transferred to the "Continuous Trading" Trading Phase. In case the Time Validity Parameter of the Limit order is set to "Immediate" (IOC), the unexecuted quantity is cancelled.

Top Order (or "At Best Opposite Price")

Top Orders are submitted by setting the Price Type field of ORDER ENTRY (OE) message to "M". Top Orders are executed only against the orders available at the best price on the opposite side of the order book.

In case of partial execution of the Top Order (when all the volume at the best price on the opposite side of the order book has been traded), the residual volume of the Top Order is automatically converted to a Limit Order, at the price at which the traded part of the Top Order has been executed.

Top Orders are available for Instrument Series in "Continuous Trading" State only. So, they cannot be entered when the Instrument State is set to "Pre Opening".

Top Orders on a strategy instrument entered into the order book are also executed at the best available price in the market for the total quantity available from contra orders. However, if there are implied limits which offer a better price than the opposite real limits in the strategy book, the incoming Top Strategy order will trade at each of the implied limits until there is no more remaining quantity. If the Top Strategy order is partially filled after being matched with the implied orders, the remaining quantity will then trade against contra orders at the best executable price in its own (strategy) book. Any residual volume left after all trades (implied and own-book trades) will be booked as a limit order at the last executed price.

Committed Orders

Committed Orders are a special order type dedicated to Trade Reports, and are submitted by setting the Price Type field of ORDER ENTRY (OE) message to "C".

For more details of Trade Reports functionality in the IDEM Trading System please refer to chapter 5.2.

Price parameter

The Price parameter must be specified for Limit Orders and for Trade Reports (it remains blank in case of Market and Top Orders). For Limit Orders, it indicates the lowest (for sell orders) or higher (for buy orders) price at which the Member Firm is willing to have the order executed. For Trade Reports, it indicates the pre-arranged price at which the Trade Report will be executed.

The inserted Price must be consistent with the tick size tables reported in chapter Tick sizes.

Quantity Term and Additional Quantity parameters

The following values can be specified for the "Quantity Term" parameter:

- Blank (no minimum quantity);
- "M": for Minimum Quantity;
- "D": for Disclosed Quantity. This value is available for Instrument Series in Continuous Trading State only and for Limit Orders only. It is used to implement "Iceberg Orders" (see Market Rules, art. 4.7.5, comma 4);

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In case the Quantity Term parameter is set, the Additional Quantity parameter must also be indicated. The value specified in the Additional Quantity parameter cannot be higher than the value in the Quantity parameter.

If the Quantity Term parameter is set to "M" or "D", the Duration Term parameter can assume only the value "J" ("Day", see paragraph 5.1.5).

Minimum Quantity

If the Quantity Term is set to MINIMUM (Quantity Term parameter set to 'M'), the order has to be executed at least for the quantity specified in the Additional Quantity parameter. If this is not possible, the order is rejected.

"Fill Or Kill" orders are implemented by setting the Additional Quantity parameter equal to the total Quantity of the Order.

For a strategy order with a Minimum Quantity, the Trading Engine evaluates if the order can be executed against opposite orders in the same strategy book, otherwise the order is rejected, even though the incoming strategy order may trade against implied orders for the minimum quantity specified at a better price than the market in its own-book.

Disclosed Quantity ("Iceberg Orders")

For Instrument Series in Continuous Trading State, it is possible to configure Limit Orders presenting a limited disclosed quantity to be filled, i.e. "iceberg orders" (Quantity Term parameter set to 'D').

The Additional Quantity for Iceberg Orders cannot be lower than 5 lots.

If the Quantity Term is set to "D", the order is booked for its total quantity, specified in the Quantity parameter. However, only the Additional Quantity is broadcast by the IDEM Trading System. Once the Additional Quantity is filled, a new Limit Order is generated with the same price level as the original order;

- a new time priority;
- Quantity equal to the lower of either the Additional Quantity or the difference between the Quantity and the Additional Quantity (the "Remaining Quantity").

In the case of several strategy orders from different strategy instruments, each with a Disclosed quantity, trading against an implied-out (outright) leg order, the Trading Engine will maintain a time-priority across the different strategy books if the Disclosed quantity for a given strategy order is totally traded.

Limitations

The Time Validity parameter for Iceberg Orders cannot be set at "Good Till Day"

During the intra-day volatility auctions, the Iceberg Orders will participate in the price determination (both with the displayed and non-displayed quantity; the displayed quantity must be at least equal to the minimum quantity set by Borsa Italiana and communicated through an official Notice).

Time Validity parameter

The following values can be specified for the "Duration Type" field of the ORDER ENTRY (OE) message:

- "J": for "Day";
- "D": for "Good Till Day";
- "F": for "Good Till Cancelled"; (till expiration)
- "E": for "Immediate Orders";

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- “W”: for “While Connected Orders”.

OE messages for Strategies (Standard Combinations and FLEXCO) can be inserted only with Time validity parameter set to “J”.

Day

A Day Order is submitted by setting the Duration Type field of the ORDER ENTRY (OE) message to ‘J’. Orders designated as ‘Day’ will remain on the order book until the order is:

- executed, or;
- cancelled, or;
- automatically cancelled at the end of the current trading day.

Good Till Day (“GTD”)

A GTD Order is submitted by setting the Duration Type field of ORDER ENTRY (OE) message to “D”. GTD orders require to set also the “GTD Date” field to the date upon which the order must expire.

Orders designated as “Good Till Day” will remain on the book until the order is:

- executed, or;
- cancelled, or;
- automatically cancelled at the end of the day specified in the “GTD Date” field.

Good Till Cancelled (“GTC”)

A GTC Order is submitted by setting the Duration Type field of ORDER ENTRY (OE) message to “F”. Orders designated as “Good Till Cancelled” will remain on the book until the order is:

- executed, or;
- cancelled, or;
- automatically cancelled at the end of the last trading day of the Instrument Series of the order.

Immediate Orders (“IOC”)

An Immediate order (also known as “Immediate or Cancel”) is submitted by setting the Duration Type field of ORDER ENTRY (OE) message to “E”.

IOC Orders are immediately executed against any existing orders on the opposite side of the order book, at the specified Limit Price or better up to the total Quantity of the IOC Order. Any residual volume after partial execution of an IOC Order is automatically deleted.

FAK (“Fill and Kill”) and FOK (“Fill or Kill”)

A Time Validity parameter set to “E” (“Immediate”) can be associated to the Quantity Term parameter in order to implement FOK and FAK orders:

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- FOK orders are implemented associating an Immediate order with the Quantity Term parameter set to "M" ("Minimum Quantity") and defining an "Additional Quantity" equal to the total quantity of order.
- FAK orders are implemented associating an Immediate order with the Quantity Term parameter set to "M" ("Minimum Quantity") and defining an "Additional Quantity" equal to the "Minimum Quantity" desired.

While Connected Orders

A "While Connected" order is submitted by setting the Duration Type field of ORDER ENTRY (OE) message to 'W'. Orders designated as "While Connected" will remain in the order book until the order is:

- executed, or;
- cancelled, or;
- automatically cancelled following a Participant disconnection, or;
- automatically cancelled in the event of a SAIL Front End failure, or;
- automatically cancelled at the end of the current trading day.

So, "While Connected" orders are valid only for the current trading day (as for Day orders).

Stop parameters

The IDEM Trading System provides a centralised management of the "Stop Loss" functionality (see Market Rules, art.5.3.2, comma 7). The Stop Loss functionality is activated specifying some additional parameters in the ORDER ENTRY (OE) message. For the purposes of this paragraph, orders submitted with an activated "Stop Loss" functionality will be referred to as "Stop Orders".

Processing of Stop Orders

The IDEM Trading System checks the Triggering Condition of the Stop Order only once the incoming order that has modified the price of the Stop Series has been completely processed. Stop Order is not triggered when the incoming order has activated a Circuit Breaker, because the order rejected changes the State of the Stop Series to "Suspended".

The IDEM Trading System processes Stop Orders using, for each Instrument Series, a separate order book that is not visible to Member Firms (the "Stop Order Book").

All orders triggered following a change of the price of the Stop Series are sorted by time priority and sequentially submitted in the instrument order book.

Stop Orders remain inactive in the Stop Order Book of the Instrument Series the order is referred to (the "Order Series"), until the price ("Stop Price") of an Instrument Series chosen by the Member Firm at order entry (the "Stop Series"), is reached.

Limitations

The IDEM Trading System allows to enter Stop Orders with the following limitations:

- the Stop Series must coincide with the Order Series;

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- Stop Order functionalities are available for Single Orders only;
- the Time Validity parameter for Stop Orders can be set as "Day" (or While Connected) only. So, not active or unexecuted Stop Orders at the close of the current trading day are automatically cancelled.

Additional order parameters for Stop Orders

The following additional parameters must be specified in the ORDER ENTRY (OE) message in case of a Stop Order:

Stop Price

The value that the price of the Stop Series must reach in order to trigger the activation of the Stop Order.

Special Price Term

Indicates the condition to be fulfilled for the Stop Order to be activated. Combines two elements: i) the relevant market price to be compared to the Stop Price (this can be chosen by the Member Firm among the last price of the Stop Series, the best buy or the best bid available in the order book for the Stop Series), and; ii) the condition that must be created between the market price of the stop series and the Stop Price, in order to trigger the activation of the Stop Order (higher or equal, lower or equal). The following six values are available:

Value		Order triggered when (Triggering Condition):		
			for Buy orders	for Sell orders
-	"S" (Stop)	Last Price	>= Stop Price	<= Stop Price
-	"E" (Stop on Bid)	Best Bid Price	>= Stop Price	<= Stop Price
-	"I" (Stop on Ask)	Best Ask Price	>= Stop Price	<= Stop Price
-	"T" (If Touched)	Last Price	<= Stop Price	>= Stop Price
-	"F" (If Bid Touched)	Best Bid Price	<= Stop Price	>= Stop Price
-	"H" (If Ask Touched)	Best Ask Price	<= Stop Price	>= Stop Price

Clearing Data

Position parameter

Member Firms are required to define, by means of the Position parameter, if the order entered in the system is:

- related to the creation of a new position ("Open"), - O
- to the closing of a previously opened position ("Close") - C.

In case of orders entered with Account Type equal to "House", or when the Position parameter is not specified, the system automatically attributes the value "Open" to the Position parameter.

Account Type parameter

Member Firms are required to define, by means of the Account Type parameter, if the order entered in the system is executed on their own account ("House") or on a third party's account ("Client").

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Quotes from Market Makers and Specialists must always be marked as "House".

Client Code parameter (Clearing Instruction)

Member Firms are required to define, by means of the Client Code parameter (Clearing Instruction), a clearing sub-account number, according to the codes available in the Clearing House systems.

Owner Data parameter

The "Owner Data" parameter of the Order Entry message is made available to Member Firms as a free-text (up to 50 characters) for storing the order date, a proprietary order identification number or any other information considered relevant by the Member Firm.

5.2 Trade Reports (Internal and Committed Cross Orders)

The IDEM Trading System supports orders aimed at executing a trade against a pre-determined counterparty ("Trade Reports"). The following categories are available (according to Market Rules, art. 4.7.8):

- Internal Cross Order: aimed at the execution of a trade where the two counterparties are represented by a unique Member Firm. A Internal Cross Order is submitted by such Member Firm through the "OX" message;
- Committed Cross Order: aimed at the execution of a trade where the counterparties are pre-determined. A Member Firm must indicate, amongst all other relevant parameters that define the order, the Firm ID of his counterparty. A Committed Order is submitted by setting the Price Type field of ORDER ENTRY (OE) message to "C".

Price Limitations for Trade Reports and Block Trades

Trade Reports are subject to price validation controls before the execution of a trade. In case price validation controls are not fulfilled, the Trade Report is not executed and a message is returned to both the counterparties of the trade. Price validation limits are differentiated in relation to the size of the Trade Report:

- for a trade size below the limits defined for Block Trades: the price of the Trade Report must be included within the best bid and ask price available on the Order Book;
- for Block Trades: a wider price interval around the available best bid-ask spread is available. The allowed price intervals are different for each Contract.

The following table summarises the minimum and maximum Quantity for Block Trades and the price deviation parameters (According to the Instructions to Market Rules, art. IA.9.1) for Committed and Internal Cross Orders (see paragraph 5.2), Block Trades are not available on the FTSE MIB Mini Futures.

Table 3 - Block Trade minimum size and price validation intervals for Block Trades

Contract	Block Trade size		Price validation interval: best bid-ask spread plus/minus*	
	Minimum	Maximum		
IDEM Equity	FTSE MIB Index Futures	5 lots	5.000 lots	1%

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	Contract	Block Trade size		Price validation interval: best bid-ask spread plus/minus*
	FTSE 100 Mini Futures	10 lots	5.000 lots	1.5%
	FTSE Mini Index Futures	n/a	n/a	n/a
	FTSE MIB Div idend Futures	5 lots	5.000 lots	2%
	Stock Futures on Italian and Pan-European underlying s	500 lots	60.000 lots	10%
	Single Stock Dividend Futures and Single Stock Dividend Futures Strategies	25 lots	60.000 lots	No price v alidation interval
	FTSE MIB Options and Weekly FTSE MIB Options	100 lots	30.000 lots	20%
	Stock Options and Weekly Stock Options	500 lots	30.000 lots	10%
IDEX	IDEX monthly futures	50 lots	5.000 lots	No price v alidation interval
	IDEX quarterly futures	30 lots	3.000 lots	
	IDEX yearly futures	15 lots	1.500 lots	
AGREX	DURUM Wheat Futures	100 lots	2000 lots	No price v alidation interval

Execution workflow

Order entry is performed according to the following:

- for Internal Cross Orders, since the two counterparts are represented by the same Member Firm, a two-sided order (by the OX message) must be inserted to complete the Trade Report. The Trade Report is immediately executed, given that the price validation control described in the previous paragraph is fulfilled. The price validation control is performed at order entry;
- for Committed Cross Orders, order entry must be done by both the counterparties of the Trade Report. The central system keeps the first order received in a dedicated private archive until the corresponding order of the Trade Report has been submitted by the other counterparty. If the two orders fully match and the price validation control described in the previous paragraph is fulfilled, the trade is executed. The price validation control is performed two times, at order entry by each of the counterparties of the Trade Report.

Internal and Committed Cross Orders do not interact with the Instrument Series' order book and their prices are not subject to the Y and Z validation procedures described in paragraph Dynamic price deviation controls (and Circuit Breakers).

Committed Orders that are still unmatched by the designated counterparty at the close of the current trading session are automatically cancelled.

Info dissemination and impact on market statistics

Trade Reports (independently by their trade size) are directly disseminated as executed trades. A proper field in the executed trade message indicates that the trade has been executed as a Trade Report.

Trade Reports below the Block Trade thresholds are counted in both prices and quantity statistics reports, but do not contribute to update the last trade price data.

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Block Trades do not contribute to update neither the last trade price data nor any price statistic report, Block Trades are counted in quantity statistics report. In reference data reports published by Borsa Italiana, the part of the total volume generated by Block Trades is separately indicated.

5.3 Strategy order management

FLEXCO creation

A participant can request the creation of a FLEXCO by submitting a NEW INSTRUMENT (ON) message. A strategy creation request must include the following information for each leg:

- Verb (Buy or Sell);
- Ratio;
- Instrument Group ID;
- Instrument Series ID.

Strategy Creation requests can be: i) accepted; ii) accepted with modifications, or; iii) rejected. In case the Strategy Creation request is accepted, a NEW INSTRUMENT ACKNOWLEDGMENT (KN) message is returned.

A strategy creation request can be accepted with modifications in the following 2 situations:

- The Strategy Ratio is reduced to the least common denominator: this situation happens when, as an example, a participant requests the creation of a 2 leg strategy where the ratio is 2 on the first leg and 2 on the second leg. During the creation of the strategy, the ratio is reduced to 1 for both legs;
- The leg verbs are reversed: this situation happens when, as an example, a participant requests the creation of a Strategy with the instruction to Sell leg A and to Buy leg B. During the strategy creation process, the strategy created can be Buy leg A and Sell leg B.

In case any modification to the Strategy is performed, the New Instrument Acknowledgement (KN) message includes the new Strategy structure and a special marker to indicate that the structure of the Strategy was modified.

The leg ordering sequence may differ from the original request but will not be marked as modified if the ratio and the verb for all legs remain the same.

Maximum number of FLEXCO

The number of FLEXCO creation requests is limited to a maximum per day for each Member Firm (99). If a Member Firm exceeds such limit, any subsequent creation request is rejected. Following the first trade occurring on a FLEXCO created by a Member Firm, the FLEXCO creation counter for such Member Firm is reduced by 1.

Order Book

A Strategy Series is configured as an Instrument Series in SOLA. For this reason, a dedicated order book is available for each Strategy Series. Such order book i) is automatically configured for Standard Combinations; ii) is generated at Instrument Series creation for FLEXCO (see Market Rules, art. 5,3.2, comma 8).

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Strategy Quote Definition

A strategy is viewed as a single instrument in SOLA, and strategies are quoted with a bid and an ask. A strategy instrument can be bought or sold like any other instrument. A strategy order can either trade against an opposite strategy order (in same instrument book) or against several leg orders (implied trade). Only strategy instruments which are system configured "implied enabled" can trade in implied mode.

A Strategy Quote is the first limit of the market depth message diffused from the Exchange routing engine for a strategy Instrument. It has the current established Best Bid/Best Ask, and Best Bid Volume/ Best Ask Volume (not including hidden volumes). It is a simple snapshot of what the market conditions are on the Instrument. The same types of strategy rules written above apply in the same manner for the strategy.

Order Types

Order Types for Strategies are the same available for Standard Series, with the exclusion of Stop Orders that are not available.

Trades Execution

According to Market Rules (art. 5.3.4, comma 3), two execution alternatives are available for Strategies:

- Strategy vs. Strategy trade, where a Strategy order is executed on the Strategy Series' dedicated order book against an opposite order on the other side of the order book, or;
- Implied trade

In addition to execution against compatible orders on the opposite side of the order book, the "implied trade" functionality is available for IDEM Strategies. So, under certain conditions, a Strategy can be executed against compatible orders that are present on the order books of the individual Series of Standard Contracts that are included in the Strategy.

Before matching orders on the Strategy Series' dedicated order book (Strategy vs. Strategy trade), the IDEM Trading System checks for a better execution alternative on the order books of single legs included in the Strategy.

Implied Orders Management

Strategy Vs. Strategy Trade

The SOLA Trading System matches the buy and sell orders at the price defined by the market (ask/bid) at the time of order entry. SOLA also calculates the trade price of each leg of the strategy and disseminates them in real-time to the parties involved in the trade and to the rest of the market. The leg prices are the price at which the legs are to be cleared. Since a strategy-strategy trade does not lift any leg orders/quotes, the leg notifications are merely "volume adjustment trades" and do not affect the last trade price and high/low statistics of the leg instruments.

Example of Strategy-Strategy Trade

Market is as follows on the September, June and September-June spread.

September contract:	104.55 – 104.58
June contract:	104.47 – 104.51
September-June Spread:	0.05 – 0.09

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A buy order 0.10 on the spread book will trade against the ask order at 0.09. The system will generate prices on each leg, say 104.58 for the September contract and the 104.49 for the June contract (giving a price differential of $104.58 - 104.49 = 0.09$).

Implied-In Trades

"Implied-in" orders are derived from regular posted orders on individual legs. "Implied-In" orders allow creating a synthetic strategy market available for trading to all market participants. "Implied-in" calculation is enabled but the dissemination is disabled for IDEM (the prices 0.04 and 0.11 in the example below will not be disseminated).

An incoming order on a strategy instrument may trade against an implied-in order, generated by outright orders from the leg markets. In case of an implied trade, SOLA also disseminates the leg prices in real-time to the party who submitted the strategy order. Note that these prices are not calculated but are the prices at which the outright (leg) orders traded. Since an implied-in trade lifts orders/quotes from the outright markets, statistics such as last trade price, traded volume and high/low prices for each of the leg instruments are affected.

Example of Implied-In Trade

Market as follows on the September, June and September-June spread.

September contract:	104.55 – 104.58
June contract:	104.47 – 104.51
September-June Spread:	0.05 – 0.12
<i>Implied prices:</i>	[0.04] – [0.11] these prices are not disseminated

The implied ask on the September - June spread book, generated by the outright ask on the September book and the outright bid on the June book, is 0.11 (i.e. $104.58 - 104.47$). The implied ask of 0.11 is better than the real ask of 0.12 on the September - June spread book. Therefore an incoming order to buy the September - June spread at 0.12 will trade against the implied ask of 0.11 and therefore generate trades against the September sell order(s) at 104.58 and the June buy order(s) at 104.47.

Leg notifications are sent to the submitting strategy participant at 104.58 for the September leg and 104.47 for the June leg.

Similarly, the implied bid on the September-June spread is generated by the outright bid of the September contract and the outright ask on the June contract at a price of $104.55 - 104.51 = 0.04$. In the above example, the real bid (0.05) of the September-June spread is better than the implied bid (0.04). Therefore an order to sell the September-June spread at a price of 0.04 will trade against the bid of 0.05 in the spread book.

Implied-Out Trades

"Implied-Out" orders for a given leg instrument are derived from a combination of an existing regular strategy order(s) and existing outright order(s) in the other underlying individual legs. This type of order allows creating a synthetic market on the given underlying leg.

Example of Implied-Out Trade

Market as follows on the September, June and September - June spread.

September-June Spread:	0.05 – 0.11
September contract:	104.55 – 104.58

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June contract: 104.43 – 104.51
Implied prices: **[104.44] – [104.53] – these prices are disseminated**

The implied bid on the June contract is generated by the bid of the September contract and the ask of the September-June spread at a price of $104.55 - 0.11 = 104.44$. An implied bid of 104.44 is better than the real bid of 104.43 in the June book. A sell order on the June contract at a price of 104.43 will hit the implied bid at 104.44 and generate trades with the buy order(s) on the September book at 104.55 and the sell order(s) on the September-June spread book at a price of 0.11. Real-time leg execution notices will be sent for the strategy order, at a price of 104.55 for the September leg and a price of 104.44 for the June contract.

Similarly, one can synthesise an implied ask of 104.53 in the June contract, generated from the ask order of 104.58 of the September book and the bid of 0.05 in the September - June spread book. In this case, the real ask of 104.51 of the September - June spread book is better than the implied ask of 104.53. An incoming order to buy at 104.53 will trade against the real ask of 104.51 instead of the implied ask of 104.51.

Minimum trading tick values

Strategy vs. Strategy trades may cause trades for the individual legs of the Strategy Series to be executed at prices that do not respect the minimum trading tick tables (as described in the Instructions to Market Rules, art. IA.9.1.1).

On the contrary, when looking for a better execution alternative through the Implied Trade functionality, Implied out Orders are always generated at prices that are consistent with the minimum trading tick of each leg of the Strategy.

Order Priority

Order Priority within a given Strategy Book

For a given strategy book, whenever there is an implied price and a real market price present, priority is always given to the best price. However, at equal price, priority is always given to the real order(s) over the implied order(s).

Example of order priority within a strategy book

Suppose the Market as follows on the September, June and September-June spread.

September contract: 104.55 – 104.58
June contract: 104.47 – 104.51
September-June Spread: **[0.04] 0.05 – 0.11 [0.11]**
Implied prices are shown in []

As shown in the above example, the implied ask on the September-June contract is 0.11 (i.e. $104.58 - 104.47$), which is at the same price as a real sell order(s) in the September-June spread book. An incoming order to buy at 0.12 will first trade against the real sell order in the September-June spread book at 0.11 instead of the implied order (from the sell order(s) of the September contract at 104.58 and the buy order(s) at 104.47).

Order Priority across several Strategy books sharing the same underlying leg

If there are several strategy orders from different strategy books, whereby each of the strategy instruments share a common underlying leg and generate the **equal implied-out price on that leg**, the strategy order with oldest timestamp (which was entered first in the system) will have a highest priority. This is shown by the following example:

Market as follows on the December, December-September spread, June, Sept-June spread.

December book: **① 104.55 – 104.58 ②**
December-September Spread: **③ 0.05 – 0.09 ④**

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September Implied limits: [104.46] – [104.53]
June book: ① 104.39 – 104.42 ②
September-June Spread: ③ 0.07 – 0.11 ④
September Implied limits: [104.46] – [104.53]

Note: ① to ④ represent the orders in the book. The sequence of entry into the trading system is also identified by the order's numbers, ① being the first order to enter, and ④ being the last one.

The implied bids on the September book are generated by:

Implied Bid from (Bid of December ① – Ask of December-Sept spread ④) is 104.46
Implied Bid from (Bid of Sept-June spread ③ + Bid of June. ②) is 104.46

An incoming order to sell the Sept. contract at 104.45 can be matched against the implied bid of 104.46 generated from either the combination of the buy order on December outright and sell order on December-Sept spread, or the combination of buy order from the Sept-June spread and the buy order on June outright.

In the above example, since the sell order of December-Sept spread ④ is entered into the system before the bid of Sept-June spread ③, it has a higher time-priority. Hence the match will first be made with the December and the December-Sept book. Any remaining quantity will then be matched against the June and Sept-June book.

The implied asks on the September book are generated by:

Implied Ask from (Ask of December ② – Bid of December-Sept spread ④) is 104.53
Implied Ask from (Ask of Sept-June spread ③ + Ask of June. ①) is 104.53

An incoming order to buy the Sept. contract at 104.52 can be matched against the implied ask of 104.53 generated from either a combination of the sell order in December and the buy order in the December-Sept spread or a combination of the sell order in the June. contract and a sell order in the Sept-June spread.

In the above example, since the buy order of December-Sept spread ④ was entered into the system before the sell order of Sept-June spread ③, it has a higher time-priority. Hence the match will first be made with the December and the December-Sept book. Any remaining quantity will then be matched against the June and Sept-June book.

5.4 Orders Cancellation

Participants may cancel all orders entered either by themselves or on their behalf by the Exchange. Cancellations will only be valid for orders, or part of an order, which are currently booked.

Member firms who entered orders have the faculty to remove their entered orders from the order book through a specific ORDER CANCELLATION (XE) message.

Order cancellation is available during the entire trading session and in the 30 minutes intervals: i) preceding market opening, and; ii) following the closing of the trading session.

To cancel an order on SAIL, the client sends an ORDER CANCELLATION (XE) message. If the cancellation is valid, SOLA sends the acknowledgement of the cancellation in the form of an ORDER CANCELLATION ACKNOWLEDGEMENT (KZ) message (Status = A: 'Order cancelled by the trader').

If the ORDER CANCELLATION is not valid, SOLA sends an ERROR (ER/TE) message indicating the error code for the first error detected.

A client can also cancel an order entered by another client belonging to the same Participant. The client that sent the cancellation request will, however, take ownership of the order and receive the ORDER CANCELLATION ACKNOWLEDGEMENT (KZ) message confirming the cancellation.

The table below describes all the scenarios where order elimination may occur **without** the participant sending a cancellation message.

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Reason for Elimination	
The order price is outside the instrument limit price	ORDER ELIMINATION (NZ) messages are sent to the Clients concerned.
During the instrument opening Market Order without opposite order are eliminated.	ORDER ELIMINATION (NZ) messages are sent to the Clients concerned.
Participant disconnection eliminates While Connected Order.	ORDER ELIMINATION (NZ) messages are sent to the Clients concerned.
Instrument state does not allow order with disclosed quantity .	ORDER ELIMINATION (NZ) messages are sent to the Clients concerned.
Cancellation of an order by the Exchange	Possible during: Order Cancellation, Trading Session, Exchange Intervention, Start of Consultation, End of Consultation, and Group Interruption. ORDER ELIMINATION (NZ) messages are sent to the clients concerned.
Instrument has expired	Carried out during Mini Batch. ORDER ELIMINATION (NZ) messages are sent
IOC orders partially filled or not filled	ORDER ELIMINATION (NZ) messages are sent
Validity of the order is reached	Carried out at the end of each trading day just before or during Mini Batch. Also carried out at the end of the week (last trading day of the weekly session) just before Post-session

5.5 Orders Modification

A participant may amend all orders self-entered or entered by the Exchange on their behalf. A participant cannot modify an order if it has been fully executed, deleted or cancelled.

During the trading session, all market participants are allowed to modify some parameters of the orders already entered in the trading book through a dedicated ORDER MODIFICATION message.

The original time priority of the entered order remains unchanged if the following Order Parameters are modified:

- Owner Data;
- Account Type;
- the Open/Close position indicator;
- Time Validity;
- Quantity (when reduced).

The original time priority of the order is not maintained when one of the following is changed:

- Quantity (when increased);
- Price.

A participant cannot modify the instrument ID or the side of the order.

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To modify an order on SAIL, the client sends an ORDER MODIFICATION (OM) message. SOLA performs validation on the order details received. When an error is detected in the incoming message, SOLA returns an ERROR MESSAGE (ER/TE) specifying the error.

If the message is valid, SOLA replaces the original order from the order book with the new one, to which it attributes a new order ID. It sends the acknowledgement of the modification in the form of an ORDER MODIFICATION ACKNOWLEDGEMENT (KM) message. This message contains the new order ID attributed to the modified order, the Original Order ID (Order ID of the modified order) and the revised characteristics of the order.

The modified order's status takes the same values as for Order Entry acknowledgements.

6.0 Quotes Management

Quotes are reserved to market makers and specialists to send, modify and cancel their posted bid and ask prices.

Market Makers' and specialists' Quotes can be entered and cancelled using the Bulk Quotes and Global Cancellation functionalities available only on SAIL Protocol.

6.1 Bulk Quote Data

Before entering a Bulk Quote, Member Firms must specify the Clearing Data parameter to be applied for all the trades that may occur as a result of orders crossing any Quote included in the Bulk Quote.

Market Makers must send this data using the SAIL Message BULK QUOTE DATA (BD) message for each group for which he is a registered Market Maker.

A BULK QUOTE DATA (BD) message is acknowledged by the BULK QUOTE DATA ACKNOWLEDGMENT (KD) message containing a Quote ID. This Quote ID references the current Order ID and the Original Order ID for all trades resulting from a Quote on any instrument of the group for the trader.

6.2 Entry of a Bulk Quote

The SAIL Message BULK QUOTE (Qi) message allows Member Firms to enter multiple Quotes within the same message for Instrument Series belonging to the same Instrument Group. Bulk Quotes are a more efficient way for a Market Maker or a Liquidity Provider to send Quotes to the IDEM Trading System.

Clients may enter a BULK QUOTE message containing up to 100 separate Quote(s). The IDEM Trading System validates the message and each Quote within the message. The BULK QUOTE message:

- cannot be associated with the Immediate execution parameter (IOC);
- the Price Type parameter must be set to "L" (Limit Order);
- the Account Type must be set to "P" (HOUSE) by Market Makers and to "C" (CLIENT) by Specialists.

If the BULK QUOTE message is not valid, SOLA responds with an ERROR (ER/TE) message indicating the error code for the first error detected.

If the message is valid, SOLA sends a BULK QUOTE CONFIRMATION (LA) message. If just a specific Quote included in the Bulk Quote cannot be processed, the BULK QUOTE CONFIRMATION (LA) message indicates the Quote number and the error code for this particular Quote.

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Quotes are valid only for the current trading day.

The function used for sending Quotes is such that each subsequent update referring to the same Instrument Series overwrites the previously sent Quotes. Market Makers and Specialists are not allowed to send Quotes on Contracts on which they do not have any quoting obligation.

6.3 Global Cancellation

The GLOBAL CANCELLATION (GC) allows Member Firms to cancel all Quotes placed with the BULK QUOTE (Qi) message, related to a specific Trader and on all Instrument Series in the same Instrument Group, with just one message.

To identify the Quotes to be cancelled, the Trader ID and the instrument Group ID must be specified.

The GLOBAL CANCELLATION message is acknowledged by the GLOBAL CANCELLATION CONFIRMATION (KG) message.

When an unsolicited cancellation is performed by the Exchange, the participant receives a NOTICE OF CANCELLATION OF ALL QUOTES (NP) message to confirm that the quotes currently live have been removed.

6.4 Request for Quotes

In certain scenarios the Exchange may decide to allow participants to utilize the Request for Quote (RFQ) functionality. RFQs allow participants to ask for a market for a given quantity of a specific instrument. This informs other participants of the interest in that instrument, allowing them to respond accordingly. Sending an RFQ does not require that a subsequent order be sent into the market. In any case, participants are not required to respond to an RFQ unless they are market makers who must respond as per their overall obligations to the market.

Request for Quotes are entered in the IDEM Trading System with the SAIL Message REQUEST FOR QUOTE (RQ) message.

A REQUEST FOR QUOTE (RQ) message must include the Instrument Series ID and the quantity.

If the message is valid, the client receives a STANDARD ACKNOWLEDGEMENT (KO) message. If the REQUEST FOR QUOTE (RQ) message is not valid, SOLA sends an ERROR (ER/TE) message indicating the error code for the first error detected.

6.5 Market Maker Monitoring

There are two types of Market Maker Monitoring:

- Market Maker Obligation to continuously provide a number of valid quotes;
- Market Maker Obligation to respond to a Request For Quote (RFQ).

Market Maker obligations are evaluated following:

- Grace Period expired following instrument state change;
- Quote update;
- Obligation Surface update;

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- Request For Quote.

The Monitoring Status (MM) message provides the Market Maker with real-time information on their quoting obligation. Every time a Market Maker is in infraction and the grace period expired, a status update is sent to the Market Maker.

The grace period is defined by the exchange in order to allow Market Makers a predefined period of time to replace a missing or invalid quote following:

- Trade;
- Market Maker Protection;
- Deliberate Quote Removal.

Market makers will have to provide valid quotes amongst the defined surface. The consecutive series of strikes are managed independently for the calls and for the puts.

Series are updated twice a day according to the underlying price value (once at 9.00 and at 15.45) and also the market makers obligations are updated accordingly by the system.

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Valid quoting patterns with proposed model

	Calls	Puts
+4		
+3	x	
+2	x	
+1	x	
ATM	x	x
-1		x
-2		x
-3		x
-4		

	Calls	Puts
+4		
+3	x	
+2	x	
+1	x	x
ATM	x	x
-1		x
-2		x
-3		
-4		

	Calls	Puts
+4		
+3	x	
+2	x	
+1	x	
ATM	x	
-1		x
-2		x
-3		x
-4		x

	Calls	Puts
+4	x	
+3	x	
+2	x	
+1	x	x
ATM		x
-1		x
-2		x
-3		
-4		

	Calls	Puts
+4	x	
+3	x	
+2	x	
+1	x	
ATM		x
-1		x
-2		x
-3		x
-4		

	Calls	Puts
+4	x	
+3	x	
+2	x	
+1	x	
ATM		
-1		x
-2		x
-3		x
-4		x

	Calls	Puts
+4		
+3		
+2	x	
+1	x	
ATM	x	
-1	x	x
-2		x
-3		x
-4		x

	Calls	Puts
+4		
+3		
+2	x	
+1	x	
ATM	x	x
-1	x	x
-2		x
-3		x
-4		

	Calls	Puts
+4		
+3		
+2	x	
+1	x	x
ATM	x	x
-1	x	x
-2		x
-3		
-4		

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For the previous example, the Market Makers obligations would be defined as follow:

- Number of strikes in the money = 4
- Number of strikes out of the money = 1
- Numbers of consecutive strikes to quote = 4

There are now 9 supported patterns:

- 1 patterns having 3 common call/put strikes;
- 2 patterns having 2 common call/put strikes;
- 3 patterns having 1 common call/put strike (current model);
- 2 patterns having no common call/put strike but where the call/put surfaces are touching
- 1 patterns having no common call/put strike and one strike between the call/put surfaces.

6.6 Quoting obligations

Quoting obligations for market Makers and specialists start at

- i) 9:30am for IDEM Equity and IDEX ii) 2:30pm for AGREX

and end at:

- j) 5:20pm for IDEM Equity ii) 5:40pm for the IDEX and AGREX .

IDEM Equity

From 9.30am until 3.45pm the “at the money” series is determined with reference to the opening price value of the underlying financial instrument of the current day.

At 3:45pm the ATM series is determined according the last price or the last index value received from the Cash Market.

For each type of Market Maker, the underlying on which the derivatives are based determines:

- The minimum number of lots to quote, depending on whether the underlying belongs to the Focus Group or not;
- Maximum allowed bid-ask spread to fulfill, depending on the specific spread table associated to the underlying.

The Focus Group composition and the underlying -spread table association are communicated through Borsa Italiana's notice.

At section 7,5 a description of the determination of the MM surface and monitoring is provided.

7.0 Trading protection functions

The IDEM Trading System embeds the following “trading protection” functions in order to support Borsa Italiana in maintaining the regular and orderly functioning of the market:

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- Automatic cancellation of orders and quotes in case of disconnection;
- Maximum order quantity checks for orders and quotes;
- Dynamic price deviation controls and Circuit Breakers;
- Market Makers' Protection.

7.1 Automatic cancellation of orders and quotes on disconnection

Orders with Time Validity parameter set to "W" ("While Connected") will be automatically cancelled in case of disconnection from the SOLA System. An ORDER CANCELLATION NOTICE message (NZ) is returned with Order Status equal to "Eliminated on Disconnect".

The IDEM Trading System makes available a specific field in the LOGIN MESSAGE (TC) ("disconnection instruction") to activate, for each Trader ID and for the current trading day only, the functionality of automatic removal of Quotes in case of disconnection.

Such field is optional. No quotes will be cancelled if such field has not been properly set during the login to the SOLA System.

7.2 Maximum order quantity checks for orders and quotes

The IDEM Trading System provides a check on the value of the Quantity parameter for every ORDER ENTRY (OE) message.

The maximum Quantity allowed for each Contract is defined in the Guide to Parameters. The current values are reported in Table 5: Maximum values for the order Quantity parameter.

If an ORDER ENTRY (OE) message is inserted with Quantity parameter higher than the limits specified in Table 5, the order is rejected and an ORDER ACKNOWLEDGEMENT (KE) message with Order Status equal to "Eliminated" is returned.

The IDEM Trading system provides a security check on the maximum value attributed to the Quantity parameter for any incoming order, to prevent erroneous order entry and maintain regular trading conditions. The Quantity limits in force on the date of publication of this document are defined in the Guide to Parameters, Maximum values for the order Quantity parameter.

Table 5 - Maximum values for the order Quantity parameter

Contract	Standard Series		Strategies (Combo/FLEXCO)	
	Limit, Market, Top Orders	Trade Reports (Cross/Committed orders)		
IDEM Equity	FTSE MIB Index Futures	500 lots	5.000 lots	2.500 lots
	FTSE100 Mini Futures	500 lots	5.000 lots	2.500 lots
	FTSE Mini Index Futures	500 lots	..	2.500 lots
	FTSE MIB Dividend Futures	500 lots	5.000 lots	2.500 lots
	Stock Futures on Italian and Pan-European underly ings	10.000 lots	60.000 lots	10.000 lots
	Single Stock Dividend Futures	10.000 lots	60.000 lots	10.000 lots
	FTSE MIB Options and Weekly FTSE MIB Options	5.000 lots	30.000 lots	5.000 lots

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	Contract	Standard Series		Strategies
	Stock Options and Weekly Stock Options	10.000 lots	30.000 lots	10.000 lots
IDEX	IDEX monthly future	150 lots	5.000 lots	..
	IDEX quarterly future	150 lots	3.000 lots	..
	IDEX yearly future	150 lots	1.500 lots	..
AGREX	Durum wheat future	1000 lots	2000 lots	..

7.3 Dynamic price deviation controls (and Circuit Breakers)

Circuit Breakers refer to the situations where either the "Y" or "Z" validations are not passed. The following two situations can happen:

- if the "Y" validation was not passed by the Theoretical Opening Price at the end of the Pre Auction Phase, the Instrument Series State is set to Reserved for a period currently set to 3 minutes plus a random period of max. 30 seconds ("Volatility Auction", see the Instructions to Market Rules, Idem Section);
- if the "Y" or "Z" validations are not fulfilled during the Continuous Trading Phase, the Instrument Series State is set to Suspended (Market Rules, art. 5.3.8, comma 2) for a pre-configured time interval, currently set to 1 minute (Instructions to Market Rules, art. IA.9.2.6, comma 1). At the end of such period, Borsa Italiana has the power to activate a Volatility Auction, so setting the Instrument Series State to Reserved (Market Rules, art. 5.3.8, comma 2).

Pursuant to the Rules, the trading parameters, Control Prices and Circuit Breaker duration may be modified by Borsa Italiana.

Order Cancellation only is available when the Instrument Series State is set to Suspended or Reserved (orders cannot be entered or modified).

The IDEM Trading System performs validations on any incoming ORDER ENTRY (OE) message (with the exception of Trade Reports) against the following prices, defined at Instrument Series level (according to Market rules, art. 5.3.8):

- the Static Control Price, defined as the reference price of the previous trading day;
- the Dynamic Control Price, defined as the last trade price during the current trading day.

The following validations are performed (according to Market Rules, art. 5.3.8):

- the Price parameter of any Limit order cannot deviate by more than a maximum percentage (the "X" parameter) from the Static Control Price ("X validation");
- the potential price of a trade deriving from the submission of an order cannot deviate by more than a maximum percentage (the "Y" parameter) from the Static Control Price ("Y validation");
- the potential price of a trade deriving from the submission of an order cannot deviate by more than a maximum percentage (the "Z" parameter) from the Dynamic Control Price ("Z validation").

"X" and "Y" validations are performed during the Opening and Continuous Trading Phase. The Z validation is performed during the Continuous Trading Phase only. The values for the "X", "Y" and "Z" parameters are defined in the Guide to Parameters.

Borsa Italiana, according to Market Rules has the power to modify the values of such parameters, of the Static Control Price and of the Dynamic Control Price on the basis of specific market conditions.

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The "X", "Y" and "Z" validation process is re-started in case of a change of the validation parameters by Borsa Italiana during the trading day.

In such case, if a Limit order that is resting on the order book fails the "X", "Y" or "Z" validation, the order is cancelled and the IDEM Trading System returns an ORDER ELIMINATION (NZ) message with Order Status equal to "Eliminated".

Order price vs. Static Control Price ("X Validation")

The Price parameter of any incoming Limit order is validated against the Static Control Price plus/minus the percentage defined by the "X" parameter.

If the Price of the incoming Limit order is outside such interval and so fails the "X validation", the order is eliminated and the IDEM Trading System returns an ORDER ACKNOWLEDGMENT (KE) message with Status field set to "Eliminated".

Trade Price vs. Static Control Price ("Y Validation")

Prior to effectively executing a trade, the IDEM Trading System validates its potential execution price. The potential execution price is validated against the Static Control Price plus/minus the percentage defined by the "Y" parameter.

If the potential trade price is outside such interval, then:

- the trade is not executed, and;

in case the potential trade should be executed during the Opening Phase:

- no trade is executed at the Opening Price;
- the Instrument Series State is changed to "Reserved" (see "Circuit Breakers");
- otherwise:
 - the incoming order is rejected. So, an ORDER ACKNOWLEDGMENT (KE) message is returned with Order Status equal to "Eliminated";
 - the Instrument Series State is changed to "Suspended";
 - an INSTRUMENT CHANGE STATE NOTICE (NI) message is broadcast with the new Instrument Series State.

In both cases, the Instrument Series State returns to its normal behavior after a period of time defined by Borsa Italiana (see "Circuit Breakers").

Trade Price vs. Last Trade Price ("Z Validation")

Prior to effectively executing a trade, the IDEM Trading System validates its potential execution price. The potential execution price is validated against the Dynamic Control Price plus/minus the percentage defined by the "Z" parameter.

If the potential trade price is outside such interval, then:

- the trade is not executed;
- the incoming order is rejected. So, an ORDER ACKNOWLEDGMENT (KE) message is returned with Order Status equal to "Eliminated";
- the Instrument Series State is changed to "Suspended";
- an INSTRUMENT CHANGE STATE NOTICE (NI) message is broadcast with the new Instrument Series State

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The Instrument Series State returns to its normal behavior after a period of time defined by Borsa Italiana (see "Circuit Breakers").

Circuit Breaker Cases

In this section, examples for the following cases are provided:

- Incoming order that triggers Circuit Breaker (order rejected)
- Incoming order partially filled due to Circuit Breaker (remainder rejected)
- Incoming order on the first leg of a strategy partially filled, remainder rejected due to Circuit Breaker on the second leg of the strategy

Incoming Order triggers Circuit Breaker: order rejected

In the following example, the case of an incoming order rejected due to Circuit Breaker is described.

Pre-conditions on the instrument FIB4C:

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	1	20495	20615	1	1	1
2	1	1	20490	20620	1	1	2
3				20625	1	1	3
4							4
5							5

Last Price: 20510

Circuit Breaker Parameters:

- Trade against reference price (Y): 3.5%
- Trade against last price (Z): 0.5%

Customer enters the following order: Buy 1 FIB4C @ 20625

Result:

1. Since the price 20625 is not valid against the Circuit Breaker Parameter Z%, the incoming order is rejected and Customer is notified with an Order Acknowledgment with status: "Removed by Circuit Breaker"
2. The trade at 20615 does not occur
3. Instrument FIB4C is Moved to Circuit Breaker status for 1 minute. The instrument state is dispatched by HSVF via H<i> message

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FIB4C during Circuit Breaker

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	1	20495	20615	1	1	1
2	1	1	20490	20620	1	1	2
3				20625	1	1	3
4							4
5							5

Incoming Order triggers Circuit Breaker: order is partially filled and the remainder is rejected due to Circuit Breaker

In the following example the case of an incoming order partially rejected due to Circuit Breaker is described.

Pre-conditions on the instrument FIB4C:

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	1	20495	20510	3	1	1
2	1	1	20490	20570	3	1	2
3				20610	3	1	3
4				20615	1	1	4
5							5

Last Price: 20500

Circuit Breaker Parameters:

- Trade against reference price (Y): 3.5%
- Trade against last price (Z): 0.5%

Customer enters the following order: Buy 10 FIB4C @ 20625

Result:

1. The following trades are executed:

- 3 @ 20510
- 3 @ 20570

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2. Since the deviation between 20610 and the previous last at 20500 (+0.54%) is above the Circuit Breaker Parameter Z%, the remainder quantity (4 lots @ 20625) of the incoming order on FIB4C is rejected. Customer is notified with an Order Acknowledgment: "Removed by Circuit Breaker"
3. The instrument FIB4C is moved to Circuit Breaker status for 1 minute and HSVF dispatches the State of the series via H<i> message.

FIB4C during Circuit Breaker

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	1	20495	20610	3	1	1
2	1	1	20490	20615	1	1	2
3							3
4							4
5							5

Incoming order on one leg of a strategy triggers the Circuit Breaker on the other leg of the strategy

In the following example the case of an incoming order partially rejected on the first Index futures expiry due to Circuit Breaker on the second Index future expiry is described (interaction with time spread strategy).

Pre-conditions on FIB4C, FIB4F, FIB4FT:

Implied aggregated prices are shown in yellow.

FIB4C

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level (including implied)
1	1	2	20910	20915	2	1	1
2	1	2	20905	20920	5	implied	2
3				20925	1	1	3
4							4
5							5

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FIB4F

Level (including implied)	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	implied	2	20760	20770	5		1
2							2
3							3
4							4
5							5

FIB3FT (Buy FIB4F, Sell FIB4C)

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	10	-150				1
2							2
3							3
4							4
5							5

Last Price FIB4C: 20910

Last Price FIB4F: 20570

Circuit Breaker Parameters (FIB4C, FIB4F):

— Trade against reference price (Y): 3.5%

— Trade against last price (Z): 0.5%

Customer enters the following order: buy 3 FIB4C @ 20920

Result:

1. The following trade is executed:
 - a. 2 FIB4C @ 20915
2. Since a strategy order has to execute both legs at the same time, please note that the matching between the remainder of the incoming order (buy 1 FIB4C @ 20920) and the implied order (sell 5 FIB4C @ 20920) would violate Z% parameter on the instrument FIB4F: the price deviation between the offer price of the instrument FIB4F (20770) and the last price of FIB4F exceeds 0.5%. The result is therefore the following:

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- a. The instrument FIB4F is moved to Circuit Breaker status for 1 minute (notification is sent to the market)
 - b. The remainder of the incoming order on FIB4C (buy 1 @ 20920) is rejected (notification is sent to the Customer)
 - c. The implied orders on FIB4C and FIB4F are removed during the Circuit Breaker phase.
3. HSVF dispatches the State of the series FIB4F via H<i> message

FIB4C

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	2	20910	20925	1	1	1
2	1	2	20905				2
3							3
4							4
5							5

FIB4F during Circuit Breaker

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1				20770	5		1
2							2
3							3
4							4
5							5

FIB4FT (Buy FIB4F, Sell FIB4C)

Level	# of Orders	BidQty	Bid	Ask	AskQty	# of Orders	Level
1	1	10	-150				1
2							2
3							3

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FIB4C

4							4
5							5

Other relevant situations for Dynamic price deviation controls

- Trade Reports: Prices of Trade Reports are not subject to the Y and Z validations;
- Long orders: the X validation process is performed on Long Orders that are present in the IDEM Trading System at the beginning of the Intervention Before Opening Phase. Long Orders that break the X validation limits are automatically removed during such Phase.

7.4 Controls and Circuit Breakers for Strategies

The IDEM Trading System performs the following controls on order and trade prices for Strategies (Standard Combinations and FLEXCO):

- Maximum order quantity check;
- X, Y and Z validation;
- "Too Deep parameter" validation.

Specificities of such controls when applied to Strategies are described below.

Maximum order Quantity check

For Strategies, the maximum order Quantity check is applied on the Quantity parameter of the Strategy Order. Maximum Quantity thresholds for Strategies are reported in Table : Maximum values for the order Quantity parameter.

Validation of the Price parameter for a Strategy order ("Too-deep parameter validation")

At order entry, the IDEM Trading System compares the Price parameter of the Strategy (the "Net Price") with the sum of the Prices of the Instrument Series included in the Strategy Series, taking into account the quantity and buy/sell position for its legs (the "Total Legs Price").

If the difference between the Net Price and the Total Legs Price is higher than a pre-defined number of ticks, the Strategy order is rejected and an ORDER REJECTION message (ER) is returned.

The maximum allowed difference is currently set to 20 ticks. Thresholds for validation could be set at different levels by instrument type and price level (with reference to the Price parameter of the Strategy Order under validation).

In order to calculate the Total Legs Price, for each leg of the Strategy Series the following price is used :

- the best available price on the same side as the ingoing order (Bid for buy orders, Ask for sell orders);
- if there are no prices on the same side, the best available price on the opposite side of the order book of the leg;
- if there are no prices available in the order book of the leg, no further checks are carried out.

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Validation of the Price parameter for implied orders (X validation)

When an order on a Strategy Series is entered, implied orders are generated on its legs. Prices of such implied orders are subject to the X validation process. If any of the legs does not pass the X validation, the Strategy Order is rejected and all the implied orders are removed. The incoming Strategy Order is rejected and an ORDER ACKNOWLEDGMENT (KE) message is returned, with Order Status equal to "Eliminated".

Circuit Breakers for Strategies (Y and Z validation)

Y and Z validation for Strategies are applied at the level of the Instrument Series included in the Strategy Series.

Trades from Strategy orders can trigger a Circuit Breaker both when the trade would be potentially closed through:

- a Strategy vs. Strategy trade. A Circuit Breaker is triggered if the prices for the individual Instrument series of the Strategy, fail to pass the Y or Z validations, or;
- an Implied trade. A Circuit Breaker is triggered if any of the implied trades on the Instrument Series of the Strategy fail to pass the Y or Z validations.

If a Circuit Breaker is triggered, the incoming Strategy Order is rejected and an ORDER ACKNOWLEDGMENT (KE) message is returned, with Order Status equal to "Eliminated".

In case one of the Instrument Series included in a Strategy is in a Circuit Breaker, the matching of the implied orders on the other legs is also inhibited.

7.5 Market Makers Protection

The SOLA Market Maker Protection feature is designed to protect market making participants from "excessive" trades due to the following:

- Technical problems at Participant's end preventing normal market updates;
- Quoting errors at Participant's end due to erroneous underlying price information;
- Unintentionally being "swept" by another Market Maker.

SOLA provides several protection counters and each counter can trigger the Market Maker Protection if its value is equal to or greater than the parameter provided by the Trader. SOLA provides two types of Market Maker Protection; Standard and Advanced. The first is enabled by default for all Market Makers and the second is optional and requires special message handling.

Protection Counters

The following lists all the protection counters available. These counters can be set by the Trader using the Bulk Quote Data (BD) message, otherwise the default market values will be in place. Functionally, protection counters are provided for each class where the Trader is assigned as Market Maker.

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Trade Counter (not currently active for IDEM): This counter is incremented by one every time the Trader executes a trade of at least N lot on any instrument of the given class. Once the counter has reached a defined threshold the Market Maker Protection is triggered.

Formula:

$$\text{Maximum Trade} = \sum \text{Trade Occurrence (Trade Volume} > \text{Minimum Volume)}$$

Volume Counter: This counter is incremented by the trade volume every time a Trader executes a trade on any instrument of a given class. Once the counter has reached a defined threshold the Market Maker Protection is triggered.

Formula:

$$\text{Maximum Volume} = \sum \text{Volume}$$

Value Counter (disabled for IDEM): This counter is incremented by the trade value every time the Trader executes a trade on any instrument of a given class.

Formula:

$$\text{Maximum Value} = \sum (\text{Trade Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value})$$

Delta Volume Counter: This counter is incremented or decremented by the trade volume every time the Trader executes a trade on any instrument of a given class. This counter determines the net underlying position using the type of option transacted and the action to buy or sell as conditions.

Formula:

$$\text{Option Delta Volume} =$$

$$\text{Absolute } \sum ((\text{Buy Call Volume} + \text{Sell Put Volume}) - (\text{Sell Call Volume} + \text{Buy Put Volume}))$$

$$\text{Future Delta Volume} =$$

$$\text{Absolute } \sum (\text{Buy Volume} - \text{Sell Volume})$$

Delta Value Counter (Disabled for IDEM): This counter is incremented or decremented by the trade value every time the Trader executes a trade on any instrument of a given class. This counter determines the net underlying position using the type of option transacted and the action to buy or sell as conditions. This counter used in combination with the delta volume enables protection against out of the money.

Formula:

$$\text{Option Delta Value} =$$

$$\text{Absolute } \sum (\text{Buy Call or Sell Put Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value})$$

$$- (\text{Sell Call or Buy Put Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value})$$

$$\text{Future Delta Value} =$$

$$\text{Absolute } \sum (\text{Buy Volume} \times \text{Price} \times \text{Contract Size} \times \text{Tick Value})$$

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- (Sell Volume x Price x Contract Size x Tick Value)

Counter Reset

If no time interval is provided by the trader, then the counter is reset every time the Trader sends a quote message to refresh the market previously posted on at least one of the class instruments.

If a time interval is provided by the Trader then the counter is reset if the interval of time between two trades is greater than the time interval provided by the trader.

Triggered Market Maker Protection

Once triggered, the Exchange automatically cancels all quotes posted by the Trader on the class. This feature "protects" both quotes currently booked and incoming quotes that the Market Maker may generate as part of an update. As soon as the Market Maker protection is triggered, the participant receives a NOTICE OF CANCELLATION OF ALL QUOTES (NP) message to confirm that the quotes currently live have been removed.

Standard Market Makers Protection

If the Market Maker Protection is triggered on an instrument class the counter is reset when the Trader sends a quote message on any instrument of this instrument class.

Advanced Market Makers Protection

Combined with the Standard Market Maker protection, the Advanced Market Maker Protection provides participants with an additional layer of defence. This feature may be enabled or disabled, on demand, by Market Makers using the MARKET MAKER PROTECTION SUBSCRIPTION (RP) message. With this message it is possible to specify to the Exchange Trading System what kind of Market Maker Protection should be enabled: Standard (behaviour described in the chapter above) or Advanced.

The MARKET MAKER PROTECTION SUBSCRIPTION (RP) can be acknowledged with a STANDARD ACKNOWLEDGMENT (KO) or rejected with an ERROR MESSAGE (ER).

Quoting for the Trader is disabled once the Advanced Market Maker Protection is triggered. Any subsequent quote update is rejected. The Trader restores its quoting capacity by sending a new MARKET MAKER PROTECTION SUBSCRIPTION (RP) message.

8.0 Trades execution management

Once a trade is executed, the system sends it to the Clearing System. At the same time the trade execution is notified to the customer and sent via market data feed to the market participants.

Data related to trades are stored in the clearing system data base and can be retrieved and managed by the clearing members using the Bit Clearing System (BCS) interface.

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At the end of the trading day, Orders and Trades report files are produced by the market for reconciliation purposes. An order and trade file is available for every trading member and can be downloaded through the BCS clearing service, CC&G application for back-office activity on IDEM market.

8.1 Cancellation of a Trade by the Exchange

If required, the Exchange can cancel a trade that took place during the day. This cancellation can be initiated in accordance with Exchange rules.

This can take place during:

- Order Cancellation
- Trading Session
- Exchange Intervention
- Consultation End
- On an Interrupted group

SOLA sends the two Member Firms concerned a TRADE CANCELLATION NOTICE (NX) message. This message specifies all the parameters related to the cancelled trade.

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Appendix 1: Contracts specifications

In this section the standard contracts available on the IDEM market are described.

A.1. IDEM Equity contracts specifications

FTSE MIB index Futures

Underlying	FTSE MIB Index
Trading hours	Opening auction: 8.30am - 9.00am (9.00.00 - 9.00.59) CET Continuous trading: 9.00am - 5.40pm CET
Quotation	Index points
Minimum price change (tick)	5 index points
Value of an index point (multiplier)	€ 5
Contract size	Future price x Multiplier
Contract months	4 nearest quarterly months of the March, June, September and December cycle are quoted at the same time in each session. New futures are quoted on the first trading day following expiration
Expiry day	The third Friday of the expiry month at 09:05am CET. If the Exchange is closed that day, the contract expires on the first trading day preceding that day
Last trading day	Expiry day, 9:00am - 9:05am CET
Settlement	Cash settled
Daily settlement price	Determined by CC&G according to the quantity-weighted average of the last 10% of contracts traded
Settlement day	The first open CC&G calendar day following the expiry day.
Final settlement price	The value of the FTSE MIB index, calculated on the opening prices of the financial instruments that make up the index recorded on the last day of trading. If the opening price of any financial instrument on the index has not been established by the end of the trading session, Borsa Italiana fixes the price in order to establish the value of the index on the basis of the prices recorded in the last session and takes into account any other relevant objective elements available.
Strategies	Time spread

FTSE MIB index mini-futures

Underlying	FTSE MIB index
Trading hours	Opening auction: 8.30am - 9.00am (9.00.00 - 9.00.59) CET Continuous trading: 9.00am - 5.40pm CET
Quotation	Index points
Minimum price change (tick)	5 index points

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Underlying	FTSE MIB index
Value of one index point (multiplier)	€ 1
Contract size	Futures price x Multiplier
Contract months	The two nearest quarterly months of the March, June, September and December cycle are quoted at the same time in each session. New futures are quoted on the first trading day following expiration
Expiry day	The third Friday of the expiry month at 09:05am CET. If the Exchange is closed that day, the contract expires on the first trading day preceding that day
Last trading day	Expiry day, 9:00am ÷ 9:05am CET
Settlement	Cash
Daily settlement price	Determined by CC&G according to the quantity-weighted average of the last 10% of contracts traded
Settlement day	The first open CC&G calendar day following the expiry day.
Final settlement price	The value of the FTSE MIB index, calculated on the opening prices of the financial instruments that make up the index recorded on the last day of trading. If the opening price of any financial instrument on the index has not been established by the end of the trading session, Borsa Italiana fixes the price in order to establish the value of the index on the basis of the prices recorded in the last session and takes into account any other relevant objective elements available.
Strategies	Time spread

FTSE 100 mini-futures

Underlying	FTSE 100 index
Trading hours	Continuous trading: 9.00am - 5.40pm CET
Quotation	Index points
Minimum price change (tick)	0,5 index points
Value of one index point (multiplier)	€ 1
Contract size	Futures price x Multiplier
Contract months	The two nearest quarterly months of the March, June, September and December cycle are quoted at the same time in each session. New futures are quoted on the first trading day following expiration
Expiry day	The third Friday of the maturity month; where this is a non-trading day for Borsa Italiana or for the London Stock Exchange, the maturity day shall be the first calendar trading day before such day for both the Exchanges.
Last trading day	The trading ends at 11.20am (CET) of the maturity day. Where in the maturity day the prices cannot be recorded in the reference market for the purpose of the determination of the settlement price of derivatives contracts on FTSE 100 index, trading in the nearest maturity shall end at 5.40pm and the settlement price for FTSE 100 index mini-futures contract is determined on the basis of the last available value of the FTSE 100 index. The new maturity is quoted from the first subsequent trading day.
Settlement	Cash

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Underlying	FTSE 100 index
Daily settlement price	Determined by CC&G on the basis of the quantity-weighted-average contract prices or the best bid/ask quotations observed on the market during a significant trading period
Settlement day	The first open CC&G calendar day following the expiry day.
Final settlement price	Equal to the value of the FTSE 100 index calculated on the last trading day on the basis of the prices of the financial instruments composing the index recorded during the LSE intra-day auction .
Strategies	Time spread

FTSE MIB Dividend index futures

Underlying	FTSE MIB Dividend Index
Trading hours	9.00am - 5.40pm CET
Quotation	Index points
Minimum price change (tick)	1 point
Value of one index point (multiplier)	€ 5
Contract size	Futures price x Multiplier
Contract months	The 5 nearest successive annual months expiry of December. New futures are quoted on the first trading day following expiration.
Expiry day	The third Friday of the expiry month at 09:05am CET. If the Exchange is closed that day, the contract expires on the first trading day preceding that day
Last trading day	Expiry day, 9:00am ÷ 9:05am CET
Settlement	Cash
Daily settlement price	Determined on the basis of the quantity-weighted-average contract prices or the best bid/ask quotations observed on the market during a significant trading period
Settlement day	The first open CC&G calendar day following the expiry day.
Final settlement price	Cumulative total of the relevant gross dividends paid by the individual constituents of the underlying index, calculated in index points on the day of the maturity of the related contract.
Strategies	Time spread

Stock futures (on Italian and Pan-European underlyings) and Single Stock Dividend Futures

Underlying	Stock futures: stocks traded on the Borsa Italiana's equity markets or major European markets. Single Stock Dividend Futures: the gross ordinary dividends paid in the current calendar year of shares of companies listed in European regulated markets
Trading hours	9:00am - 5:40pm CET
Quotation	Euro

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Underlying	<p>Stock futures: stocks traded on the Borsa Italiana's equity markets or major European markets.</p> <p>Single Stock Dividend Futures: the gross ordinary dividends paid in the current calendar year of shares of companies listed in European regulated markets</p>
Minimum price change (tick)	€ 0,0001
Multiplier	Depending on the underlying
Contract size	Price x multiplier
Contract months	<p>Stock futures on Italian underlyings The 4 nearest quarterly maturities and the 2 nearest monthly maturities giving a total of 6 maturities, if the underlying consists of shares included in the FTSE MIB index or equivalent leading indices. The nearest quarterly maturity and the 2 nearest monthly maturities, giving a total of 3 maturities, if the underlying consists of Italian shares other than those included in the FTSE MIB. Moreover, for some underlyings established by Market Notice, the annual maturities (December cycle) of the 2 years subsequent the current year are also quoted.</p> <p>Stock futures on Pan-European underlyings The 4 nearest quarterly maturities and the 2 nearest monthly maturities giving a total of 6 expirations.</p> <p>Single Stock Dividend Futures Contracts can be traded with maturities in the months of December of the five subsequent years.</p>
Expiry day	<p>Stock futures on Italian underlyings: the 3rd Friday of the expiry month at 9:05am CET</p> <p>Stock futures on Pan-European underlyings: the 3rd Friday of the expiry month at 5.40pm CET.</p> <p>Single Stock Dividend Futures: the 3rd Friday of the expiry month at 9:05am CET</p> <p>In all cases, if the Exchange is closed that day, the contract expires on the first trading day preceding that day.</p>
Last trading day	Expiry day
Settlement	<p>Stock futures on Italian underlyings: physically or cash settled, depending on the underlying.</p> <p>Stock futures on Pan-European underlyings: cash settled.</p> <p>Single Stock Dividend Futures: cash settled.</p>
Daily settlement price	Determined by CC&G according to the theoretical value taking the reference price of the underlying and other factors into account
Settlement day	<p>Stock futures on Italian underlyings:</p> <ul style="list-style-type: none"> - for cash settled contracts: the first open CC&G calendar day following the expiry day; - for physically settled contracts: the second open TARGET calendar day following the expiry day. <p>Stock futures on Pan-European underlyings: the first open CC&G calendar day following the expiry day.</p> <p>Single Stock Dividend Futures: the first open CC&G calendar day following the expiry day.</p>
Final settlement price	<p>Stock futures on Italian underlyings: the opening auction price of the underlying share on the expiry day.</p> <p>Stock futures on Pan-European underlyings: the closing auction price of the underlying share on the expiry day.</p> <p>Single Stock Dividend Futures: the value of the contract on the expiry day.</p>
Strategies	Time spread and FLEXCO

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FTSE MIB index options

Underlying	FTSE MIB index	
Trading hours	9.00 am - 5.40 pm CET	
Style	European	
Quotation	Index points	
Minimum price change (tick)	Premium Value 1 – 100 102 – 500 ≥ 505	Tick (index points) 1 2 5
Value of one index point (multiplier)	€ 2.5	
Contract size	Strike x Multiplier	
Option price (premium)	Value of the option premium x multiplier	
Strikes generation	< 12 months 15 strikes with intervals of 250 index points for the nearest expiry and 500 index points for the following expiries	> 12 months 21 strikes with intervals of 1,000 index points
Contract months	< 12 months 6 expiries, the 4 quarterly (Jan-Mar-Sep-Dec) plus the 2 nearest monthly	> 12 months half yearly (Jun-Dec cycle) plus the 2 yearly (Dec) up to 5 years
Expiry day	The third Friday of the expiry month at 9:05am CET. If the Exchange is closed that day, the contract expires on the 1st trading day proceeding that day.	
Last trading day	Expiry day (until 9:05am CET)	
Exercise at maturity	ITM options are automatically exercised on the expiry day. Intermediaries can also exercise "by exception" ATM and OTM options by 10:00am CET on the expiry day	
Settlement	Cash settled	
Daily settlement price	The clearing and settlement of contracts will take place according to the procedures and time limits established in the rules issued by CC&G	
Premium settlement	Settled in cash and paid on the CC&G open day following the trading day.	
Settlement day	The first open CC&G calendar day following the expiry day.	
Final settlement price	The value of the FTSE MIB Index, calculated according to the opening prices of index components on the last trading day. If the opening price of any financial instrument on the index has not been established by the end of the trading session, Borsa Italiana fixes the price in order to establish the value of the index on the basis of the prices recorded in the last session and takes into account any other relevant objective elements available	
Strategies	FLEXCO	

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FTSE MIB weekly index options

Underlying	FTSE MIB index
Trading hours	9.00am - 5.40pm CET
Style	European
Quotation	Index points
Minimum price change (tick)	Equal to 1 index point
Value of one index point (multiplier)	€ 2.5
Contract size	Strike x Multiplier
Option price (premium)	Value of the option premium x multiplier
Strikes generation	21 strikes with intervals of 100 index points
Contract months	3 or 4 expiries in the current month, depending on the number of Fridays in the month (excluding the 3 rd Friday of each month)
Expiry day	The contract expires on the 1 st , 2 nd , 4 th and 5 th (if there is one) Friday of the expiry month at 9.05am. If the Exchange is closed that day, the contract expires on the first trading day preceding that day.
Last trading day	Expiry day (until 9:05am CET)
Exercise at maturity	ITM options are automatically exercised on the expiration date. Intermediaries can also exercise "by exception" ATM and OTM options by 10:00am CET on the expiration day
Settlement	Cash
Daily settlement price	The clearing and settlement of contracts will take place according to the procedures and time limits established in the rules issued by CC&G
Premium settlement	Settled in cash and paid on the CC&G open day following the trading day.
Settlement day	The first open CC&G calendar day following the expiry day.
Final settlement price	The value of the FTSE MIB Index, calculated according to the opening prices of index components on the last trading day. If the opening price of any financial instrument on the index has not been established by the end of the trading session, Borsa Italiana fixes the price in order to establish the value of the index on the basis of the prices recorded in the last session and takes into account any other relevant objective elements available
Strategies	FLEXCO

Stock options

Underlying	Stocks traded on Borsa Italiana's equity market
Trading hours	9.00am - 5.40pm CET
Style	American
Quotation	Euro
Minimum price change (tick)	€ 0.0005

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Underlying	Stocks traded on Borsa Italiana's equity market		
Multiplier	Depending on the underlying		
Contract size	Strike x Multiplier		
Option price (premium)	Premium x Multiplier		
Strikes generation	<table border="1"><tr><td>< 12 months 15 strikes with intervals defined in the relevant table</td><td>> 12 months 21 strikes with intervals twice the size of the intervals for the respective series with expiries within less than 12 months</td></tr></table>	< 12 months 15 strikes with intervals defined in the relevant table	> 12 months 21 strikes with intervals twice the size of the intervals for the respective series with expiries within less than 12 months
< 12 months 15 strikes with intervals defined in the relevant table	> 12 months 21 strikes with intervals twice the size of the intervals for the respective series with expiries within less than 12 months		
Contract months	6 expiries, the 4 quarterly plus the 2 nearest monthly. In some cases, specified in notices of Borsa Italiana, are also quoted 4 half yearly (Jun-Dec cycle), up to 3 years, adding up to a total of 10 expiries		
Expiry day	The 3rd Friday of expiry month at 8:15am CET. If the Exchange is closed that day, the contract expires on the first trading day preceding that day		
Last trading day	Trading in any contract ends the day before expiry at 5:40pm CET		
Exercise at maturity	The exercise is automatic if the option is ITM. Intermediaries can also exercise "by exception" ATM and OTM options by 08:15am CET on the expiration day		
Settlement	Physically settled.		
Daily settlement price	The clearing and settlement of contracts will take place according to the procedures and time limits established in the rules issued by the CC&G		
Premium settlement	Settled in cash and paid on the CC&G open day following the trading day.		
Settlement day	The second open TARGET calendar day following the expiry day.		
Early Exercise	Every day before expiry by 6:30pm CET, excluding in the session preceding the day for the distribution of dividends on the share underlying the contract and preceding the start of capital operations involving the share underlying the contract		
Final settlement price	The closing auction price of the underlying share on the last trading day.		
Strategies	FLEXCO		

Weekly stock options

Underlying	Stocks traded on Borsa Italiana's equity market
Trading hours	9.00am - 5.40pm CET
Style	American
Quotation	Euro
Minimum price change tick	€ 0.0005
Multiplier	Same of the existing stock option contracts
Contract size	Strike x Multiplier
Option price (premium)	Premium x Multiplier

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Underlying	Stocks traded on Borsa Italiana's equity market
Strikes generation	21 strikes (ATM, 10 ITM, 10 OTM)
Contract months	3 or 4 expiries in the current month, depending on the number of Fridays in the month (excluding the 3 rd Friday of each month).
Expiry day	The contract expires on the 1 st , 2 nd , 4 th and 5 th (if there is one) Friday of the expiry month at 8:15am CET. If the Exchange is closed that day, the contract expires on the first trading day preceding that day.
Last trading day	Trading in any contract ends the day before expiry at 5:40pm CET.
Exercise at maturity	The exercise is automatic if the option is ITM. Intermediaries can also exercise "by exception" ATM and OTM options by 08:15am CET on the expiration day
Settlement	Physically settled
Daily settlement price	Same methodology used for existing stock option contracts
Premium settlement	Settled in cash and paid on the CC&G open day following the trading day.
Settlement day	The second open TARGET calendar day following the expiry day.
Early Exercise	Every day before expiry by 6:30pm CET, excluding in the session preceding the day for the distribution of dividends on the share underlying the contract and preceding the start of capital operations involving the share underlying the contract
Final settlement price	The closing auction price of the underlying share on the last trading day.
Strategies	FLEXCO

A.2. IDEX's electricity contracts specifications

IDEX monthly future contract

Underlying Commodity	Baseload: One Megawatt (MW) supplied during the delivery month. Peakload: One Megawatt (MW) supplied from 8:00 to 20:00 during the delivery month, excluding Saturday and Sunday.
Quotation	Euro/MWh
Minimum Tick	0,01 €/MWh
Contract Size	Result of the multiplication of the future price by the number of hours in the delivery period.
Tradable expirations	In the same trading session the first three monthly expirations are negotiable.
Expiration day	Last day of the delivery month.
Last Trading day	Last trading day before the start of the delivery period.

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Underlying Commodity	Baseload: One Megawatt (MW) supplied during the delivery month.	Peakload: One Megawatt (MW) supplied from 8:00 to 20:00 during the delivery month, excluding Saturday and Sunday.
Settlement	Cash settlement. Option for physical delivery: the third trading day preceding the beginning of the delivery period the clients of the markets of the "Gestore dei Mercati Energetici S.p.A." (GME) may send to the clearing house a request for a physical delivery of the electricity instead of the cash settlement. The request needs to be approved by GME.	
Settlement day	First clearing day after the last day of the delivery period, in case the last day of the delivery period is a trading day; Second clearing day after the last day of the delivery period, in case the last day of the delivery period is a non-trading day; In both cases, the settlement is always performed the day after the settlement price communication.	
Settlement Price	The settlement price of the contract shall be equal to the arithmetic average of the hourly PUNs of the delivery month, rounded to two decimal digits. The price will be rounded upward in case the third decimal digit is equal to 5.	
Negotiable strategies	Not available.	

IDEX quarterly futures contract

Underlying Commodity	Baseload: One Megawatt (MW) supplied during the delivery month.	Peakload: One Megawatt (MW) supplied from 8:00 to 20:00 during the delivery month, excluding Saturdays and Sundays.
Quotation	Euro/MWh	
Minimum Tick	0,01 €/MWh	
Contract Size	Result of the multiplication of the future price by the number of hours in the delivery period.	
Tradable expirations	In the same trading session the first four quarterly expirations are negotiable.	
Expiration day	Last day of the delivery quarter.	
Last Trading day	Fourth trading day before the start of the delivery period.	
Settlement	"Cascading" method is applied.	
Cascading	End of last trading day.	
Negotiable strategies	Not available.	

IDEX yearly futures contracts

Underlying Commodity	Baseload: One Megawatt (MW) supplied during the delivery month.	Peakload: One Megawatt (MW) supplied from 8:00 to 20:00 during the delivery month, excluding Saturday and Sunday.
Quotation	Euro/MWh	
Minimum Tick	0,01 €/MWh	

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Underlying Commodity	Baseload: One Megawatt (MW) supplied during the delivery month.	Peakload: One Megawatt (MW) supplied from 8:00 to 20:00 during the delivery month, excluding Saturday and Sunday.
Contract Size	Result of the multiplication of the future price by the number of hours in the delivery period.	
Tradable expirations	Baseload: Two expirations	Peakload: One expiration.
Expiration day	Last day of the delivery year.	
Last Trading day	Fourth trading day before the start of the delivery period.	
Settlement	"Cascading" method is applied.	
Cascading	End of last trading day.	
Negotiable strategies	Not available.	

A.3. AGREX contracts specifications

Underlying Commodity	Durum wheat
Quotation	Euro/metric ton
Minimum Tick	0,25 €/t
Contract Size	Result of the multiplication of the future price by 50 metric tons
Tradable expirations	In the same trading session 5 expirations are tradable
Delivery months	March, May, September, December
Last Trading day	10th calendar day of the delivery month. If it is not a trading day, the next trading day.
Settlement	Physical delivery.
Negotiable strategies	Not available.

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Appendix 2: Certification Test Programme

The Certification Test Programme is based on regulatory compliance supporting interoperability against Borsa Italiana and the other eligible London Stock Exchange Group (LSEG) venues. The current eligible venues are Borsa Italiana, London Stock Exchange and Turquoise.

The following Certification Test Programme applies to anyone connecting a software application to an LSEG Live Service. A Live service is any production Trading or Information Services environment across LSEG.

Under EU and national regulatory requirements (including the ESMA Guidelines on Systems and Controls in a Highly Automated Trading Environment) Borsa Italiana is required to have procedures and arrangements to ensure fair and orderly trading. This includes requirements for physical and electronic security to protect systems from misuse or unauthorised access and to ensure the integrity of the data that is part of or passes through the systems. Borsa Italiana is required to undertake standardised certification testing to ensure that members and participants systems used to access the venues have a minimum level of functionality that is compatible with fair and orderly trading on those venues.

Customer non-compliance with this Certification Test Programme may constitute a breach of the eligible venue terms and conditions or rules.

B.1 Access to the Live Service

Access to the LSEG Live Services is permitted only when a customer's software application has been certified as being fit for purpose.

B.2 Software Identification

All customer software must be identifiable by a software name and version number. Software applications that do not have both a name and version number will not be certified. Certification is limited to a single version of the named software.

B.3 Certification Policy

For Equities, Borsa Italiana and the other venues (London Stock Exchange and Turquoise) which are on the same Millennium code set have a combined certification test template. This will enable customers to test the combined set on any of the platforms and it will be applicable across all three venues.

For Derivatives, Borsa Italiana and Turquoise are on the same SOLA code set and also have a combined certification test template.

The new Certification Test Program mandates any customer application that connect to Borsa Italiana, LSE and Turquoise to certify at least twice a year with a minimum of 6 months between tests (This minimum period will be waived for mandatory LSEG Venue releases).

At least one Certification Test will be LSEG led (i.e. Mandatory release). The other required test will be Client Led. If the number of LSEG mandatory tests is greater than one, there will be no obligation to perform a Client Led test.

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In both LSEG and Client Led tests a customer will need to perform either a Full Certification Test or a Self Certification Checklist. A Full Certification Test is completed with support from LSEG. A Self Certification Checklist is a full certification test which is completed by the customer without support from LSEG.

Software certification remains valid for twelve months from the date of the second certification test.

Full details about the Certification test are available on Borsa Italiana web site at the following link

<http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/migrazione-millennium-it-mit/millennium-it-migration.htm>
<http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/migrazione-millennium-it-mit/millennium-it-migration.en.htm>

for cash markets, and

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

for derivatives markets.

B.4 Certification passport

Customers that have successfully completed the full certification process on an eligible LSEG venue are allowed to connect their software to any other eligible LSEG venues.

This is where there is no difference in functionality between the venues, the related certification test cycles are the same on each venue and under the following conditions:

- The software name and version number are the same on each venue.
- The functionality that will be used was tested as part of the Full Certification test.
- The customer completes and returns a self certification checklist for each additional venue.

B.5 Test Scenario Exception Policy

Customers only need to complete the test cases relating to the functionality that they will use on the Live Services. If a customer's application does not support the functionality described in a particular test scenario and they do not intend to complete the scenario during the test, this must be agreed before the start of the certification test.

B.6 Re-certification Policy

Customers are required to re-certify their applications under the following conditions:

The customer modifies the software in any way that directly impacts LSEG interfaces. This includes but is not limited to updates to Gateways, Order Management, Execution Management and Quote Management Software.

- The Exchange upgrades its production environment to a later version of software
- The software certification period has expired
- The customer is requested to re-certify their application by the relevant venue

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B.7 Non-Conformant Behaviour on the Live Service

Any non-conformant behaviour by a customer's software application on the Live Services may lead to the software application being disconnected and not re-connected until it has been re-certified and the non-conformant behaviour corrected.

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