Borsa Italiana

IDEM: Guide to the Trading System

Future documentation - DRAFT

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London Stock Exchange Group

IDEM: Guide to the Trading System

Table of Contents

1. Introduction **7**

2. Architecture **9**

2.1 Central System (back-end level) 9

2.2 Access System (front-end level) 11

a. SAIL Protocol 11

b. FIX Protocol 11

c. HSVF Protocol 11

2.3 Interconnected Systems 12

2.4 Market Connectivity 12

a. Member Firms 12

b. User categories (Front-End Users) 12

c. Connection Types 13

d. Identification of Users 14

e. Connection Security 15

f. Throttling 15

3. Market Overview **15**

3.1 Traded Contracts and Series 16

a. Standard Contracts 16

a.1) Examples for the IDEM Equity segment 18

a.2) Examples for the IDEX segment 19

a.3) Examples for the AGREX segment 21

b. Strategies 21

b.1) Standard Combinations 21

b.2) User Defined Strategy (FLEXCO) 22

b.3) IDEX FLEXCO: Location Spread 23

3.2 Trading Phases 24

3.3 Order Types 25

3.4 Tick sizes 25

3.5 Mifid 2 Market Makers, Voluntary Market Makers and Specialists 26

3.6 Non-Executing Broker (NEB) 27

4. Market Structure **27**

4.1 Instruments Series 28

4.2 Instrument Groups 28

4.3 Instrument Group States 28

IDEM: Guide to the Trading System

a. Start of Consultation 29
b. Intervention Before Opening (Order Cancellation) 29
c. Pre-Opening 30
d. Opening 31
e. Continuous Trading 31
f. Exchange Intervention 32
g. End of Consultation 32
h. Mini Batch 32
i. Forbidden 32
j. Interrupted 32
4.4 Instrument Series States 33
a. Strategies' Instrument Series State 34
4.5 Communication of stress market conditions (SMC) 34
4.6 Strike generation rules 35
4.7 Adjustment of stock options, stock futures and single stock dividend futures 35

5. Orders Management 36
5.1 Order Entry 36
a. Price Type parameters 37
b. Price parameters 39
c. Quantity Term and Additional Quantity parameters 39
d. Duration Type parameters 40
e. Stop parameters 41
f. Clearing Data parameters 42
g. Owner Data parameter 43
5.2 Negotiated Transactions 43
a. Categories 43
b. Quantity/notional value and price controls for Negotiated Transactions 45
c. Info dissemination and impact on market statistics 46
5.3 Strategy order management 46
a. FLEXCO creation 46
b. Maximum number of FLEXCO 47
c. Order Book 47
d. Strategy Quote Definition 47
e. Order Types 47
f. Trades Execution 47
g. Implied Orders Management 48
Example of Strategy-Strategy Trade 48
Example of Implied-In Trade 48
Example of Implied-Out Trade 49
h. Minimum trading tick values 49

IDEM: Guide to the Trading System

i. Order Priority 49

Example of order priority within a strategy book 49

5.4 Orders Cancellation 50

5.5 Orders Modification 51

6. Quotes Management 52

6.1 Bulk Quote Data 52

6.2 Entry of a Bulk Quote 52

6.3 Indication of interest to trade (IT) 53

6.4 Market Maker Monitoring - for Voluntary Market Makers and Specialists 53

6.5 Time interval of quoting obligations 54

a. IDEM Equity 55

7. Trading protection functions 55

7.1 Exchange level controls 55

a. Maximum order quantity checks (for orders and quotes) 55

b. Maximum notional value checks (for orders and quotes) 55

c. Dynamic price deviation controls and Circuit Breakers 56

7.2 User-defined controls 62

a. Automatic cancellation of orders and quotes in case of disconnection 62

b. Global Cancellation (for orders / quotes / both) 62

c. Kill Switch functionality 63

d. Market Maker Quoting Protection (MMQP) 63

d.1) Standard MMQP 65

d.2) Advanced MMQP 65

e. Self-Execution Prevention (SEP) 65

e.1) Basic functionality 65

e.2) Exceptions to SEP Rules 66

f. Pre-Trade Validation (PTV) functionality 66

8. Trades execution management 68

8.1 Amendment or cancellation of a trade by the Exchange 68

Appendix 1: Specifying regulatory information in order entry messages 69

Appendix 2: Trading venue, instrument, order and trade identifiers 73

Appendix 3: Contracts specifications 77

FTSE MIB index futures 77

FTSE MIB index miniFutures 78

FTSE MIB Dividend index futures 79

Stock futures (on Italian and Pan-European underlyings) and Single stock dividend futures 80

FTSE MIB index options 81

FTSE MIB weekly index options 82

IDEM: Guide to the Trading System

Stock options 83

Weekly stock options 84

IDEX monthly future contract - Italy Area 85

IDEX quarterly futures contract - Italy Area 85

IDEX yearly futures contracts - Italy Area 86

IDEX monthly future contract - Germany / Austria Area 86

IDEX quarterly futures contract - Germany / Austria Area 87

IDEX yearly futures contracts - Germany / Austria Area 87

Appendix 4: Certification Test Programme **89**

IDEM: Guide to the Trading System

1. 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 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 which 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 Price type 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.
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	October 2014	Added SSF up to 3 years. Added option for physical delivery for IDEX contracts (Appendix 1).
2.0	February 2015	Added mapping of Underlying Symbol - Class Symbol for Weekly Stock Options and Weekly MIBO. Include limits for Trade Reports below Block Trade Quantity. Include Non-Executing Brokers Committed Cross Orders.

Issue	Date	Description
2.1	July 2015	Certification Test Programme Updated
2.2	October 2015	Added IDEX new contracts specs and naming convention
2.3	October 2015	Amended MM Protection behaviour when Time Interval = 0 and further details on IDEX FLEXCO
2.4	November 2015	Amended Settlement details for IDEX – Germany/Austria Area
3.0	November 2015	Amended market hours following entry into force of the new Borsa Italiana's Rules and related Instructions
3.1	January 2016	Minor corrections
3.2	March 2016	Added support for 4 leg Strategies, Bundle Orders, Third Party and Self Execution Prevention (SEP). Added comments regarding ratio on the leg and Theoretical Price Dissemination on HSVF
3.3	June 2016	Amendment to the Instructions of the Market - IDEM Market – Single Stock Option Tick table. Fine tunings
3.4	July 2016	Rewording and fine tunings on Appendix 2: Certification Test Programme
3.5	August 2016	Added details of Market Making Protection counters' reset. Amendment of End of Consultation phase description and allowed actions
3.6	February 2017	Contract Specs for ESO, amendment of IDEX NEB
3.7	June 2017	Introduction of: 1) Pre-Trade Validation (PTV) functionality and 2) Extended trading hours on FTSE MIB index futures and miniFutures *(effective from July 3rd, 2017)*
3.8	June 2017	Appendix 2: updated Certification Test Programme *(effective from July 1st, 2017)*
4.0	August 2017	Amendments related to SOLA 11 release *(effective from 27 November 2017)*

1.4 Enquires

For any technical question related to the SOLA trading system of the IDEM market, please contact the Service Desk of Borsa Italiana:

- toll free number: 0080026772000;
- from mobile: +39 02 45411399;
- email: service-desk@borsaitaliana.it.

2. 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 market.

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)

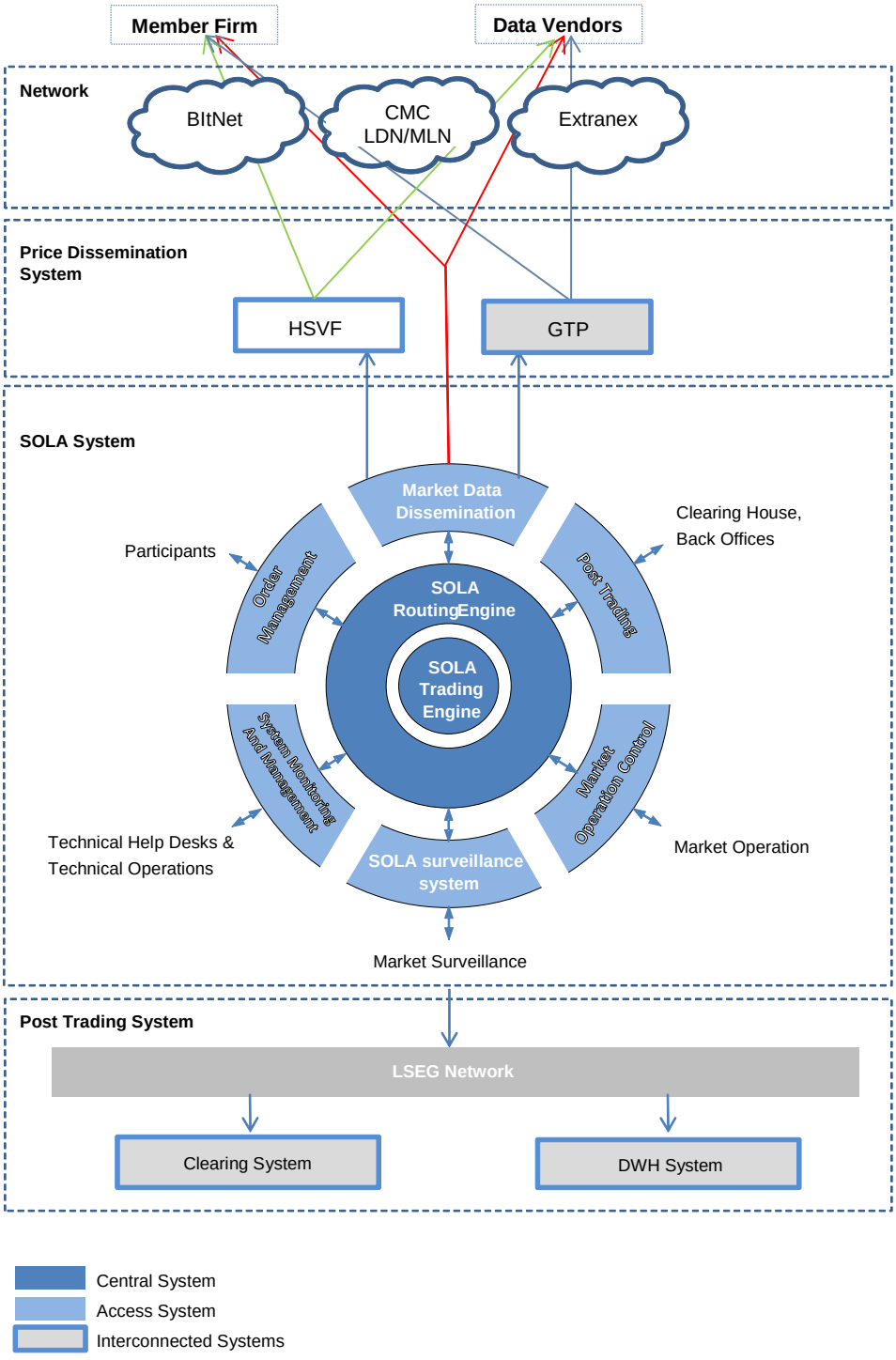
The Central System includes: i) the SOLA Trading Engine, and: ii) the SOLA Routing Engine.

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.

Figure 1: Logical architecture of the IDEM Trading System



2.2 Access System (front-end level)

The Access System is responsible for allowing members to access trading Central System's 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. In particular, it supports: i) 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 ii) 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 3 components (System Monitoring and Management; SOLA Surveillance System; Market Operation Control) provide real time and historical data to teams involved in the analysis and reconstruction of market events. Furthermore, they provide functionalities related to the management of systems through graphical user interfaces.

a. 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.

b. 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.

c. 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;
- 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.: underlying "xyz" only, or as many underlying as needed)
    - Derivatives instrument types (options, futures, both)
    - Data type (market depth, top of book, trades, referential data);
- Aggregated order book: the aggregated order book (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's 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.

a. Member Firms

In order to access IDEM market, 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 Member Portal. Each Member Firm is assigned a unique identification code (Member ID), corresponding to the Member Firm's CED code.

b. 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;
- PTP User;
- Basic Quoting User;
- Additional Quoting User;
- Panic Quotes User;
- Risk Manager 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 (tps) and iii) trading privileges (e.g. the PTP User is limited to FTSE MIB index futures and FTSE MIB index miniFutures).

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

Users are the entry point to the SOLA System. The available profiles are defined by Borsa Italiana and the pricing for additional components are reported in the "Pricelist for trading services".

User Category	Connection Type	Capacity Limit	Description
Standard User	OR (Order Routing) or FX (FIX) connections types	Max. 30 (single order) tps	
Advanced User	OR (Order Routing) or FX (FIX) connections types	Max. 90 (single order) tps	
PTP (Proprietary Trading Program) User	OR (Order Routing) or FX (FIX) connections types	Max. 150 (single order) tps	PTP Users can be used only to send orders on proprietary account on the FTSE MIB index futures and miniFutures. The maximum number of PTP Users for each Member Firm is 3.
Risk Manager User	RM (Risk Manager)		Allows a Member Firm ("Risk Manager") to set up and manage Pre-Trade Validations controls to constrain the trading activity of its controlled "Managed Entity".
Drop Copy User	DC (Drop Copy)		Allows Member Firms to receive all orders and trades sent by all the traders of the Member Firm.
User Categories reserved to Market Makers and Specialists			
Basic Quoting User	Bulk Quotes (BQ)	Number of tps (Bulk Quotes or Global Cancels) based on Market Maker / Specialist obligations (100 single quotes per each BQ)	Includes one or more tps which can be Bulk Quotes or Global Cancels. The number of allowed BQ per second is equal to the number of underlyings/groups covered by the Member Firm's Market Maker / Specialist obligations. This value is rounded up, and a minimum of 4 BQ per second is guaranteed. The Market Maker / Specialist can: • distribute the available tps among one or more Basic Quoting Users • request additional tps (in sets of 4). Each BQ comprises a maximum of 100 single quotes, which has to be sent on instruments belonging to the same group.
Panic Quotes User	Panic Quotes (PQ)		Allow to cancel orders and/or quotes inserted through a Quoting User. Market Makers / Specialists can send a number of Panic Quotes allowing cancelling all orders and/or quotes inserted on every underlying covered by their quoting obligations. PQ are structured in line with BQ, thus allowing cancelling a maximum of 100 single quotes for each transaction.

c. Connection Types

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 order and/or quotes through dedicated messages (Sail Global Cancellation Message GC), including up to 100 single quotes cancellations in a single message via SAIL Protocol;
- RM (Risk Manager): available to all Member Firms on request. Allows a Member Firm ("Risk Manager") to set up and manage Pre-Trade validations controls to constrain the trading activity of its controlled "Managed Entity";
- 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, and modify orders via FIX.

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

	Connection Types					
Message Types	**OR**	**BQ**	**PQ**	**RM**	**DC**	**FX**
Order Entry	OE					D
Order Modification	OM					G
Order Cancellation	XE					F
Cross Entry	OX					s
Bundle Order	BO					AE
Proposal Acceptance	OB					AR
Proposal Cancellation	XP					AR
Proposal Request (available only for Non-Executing Brokers)	PR					AE
New Strategy Instrument	ON					c
Request For Quote	RQ	RQ				R
Bulk Quotes		RP, BD, Qi				
Global Cancellation (for orders / quotes / both)		GC	GC			
Risk Limits Configuration				MK, MQ		
Risk Limits Usage Notice				MN		
Risk Master Switch (for orders and quotes)				RT		
Order Mass Status Request						AF
List of Securities Request						c

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

d. 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]

where:

- Connection Type is a two letter acronym identifying the Connection Type (OR, BQ, PQ, RM, 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)
- RM + XX + CED Code (RM = Risk Manager)

- 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

e. 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.

f. 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. 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 Borsa Italiana's Rules and related Instructions:

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

The IDEM market currently offers trading services on futures, options and their related combinations.

3.1 Traded Contracts and Series

Borsa Italiana defines the specifications of the derivatives contracts admitted to trading on the IDEM market in the Borsa Italiana's Rules and related Instructions (see summary provided in Appendix 1). Throughout this document, the term "Standard Contract" is used to indicate an individual futures or option contract. For each Standard Contract, a Series is defined as a unique combination of:

- underlying[1];
- strike price;
- lot size;
- expiry date;
- settlement type (cash vs. physical delivery).

Series are managed in SOLA as "Instrument Series" and are identified with an Instrument ID. Each Instrument Series is associated to a unique Series Name which is defined according to the specific naming scheme that is different for Standard Series, Standard Combinations and FLEXCO. Combinations of Standard Contracts' Series can be referred to as "Strategies".

a. 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 on the FTSE MIB index
	FTSE MIB miniFutures	IDEM Equity	miniFutures contract on the FTSE MIB index
	FTSE MIB Dividend futures	IDEM Equity	Futures contract on the FTSE MIB Dividend index
	Stock futures	IDEM Equity	Futures contract on individual shares
	Pan-European stock futures	IDEM Equity	Futures contract on Pan-European individual shares
	Single stock dividend futures	IDEM Equity	Futures contract on ordinary gross dividend paid by underlying individual shares
	Power yearly futures	IDEX	Yearly (baseload or peakload) futures contract on Electrical Energy (Italy and Germany/Austria areas)
	Power quarterly futures	IDEX	Quarterly (baseload or peakload) futures contract on Electrical Energy (Italy and Germany/Austria areas)
	Power monthly futures	IDEX	Monthly (baseload or peakload) futures contract on Electrical Energy (Italy and Germany/Austria areas)
	Durum Wheat futures	AGREX	Futures contract on Durum Wheat
Options contracts	FTSE MIB options	IDEM Equity	Options contract on the FTSE MIB index
	FTSE MIB weekly options	IDEM Equity	Weekly option contracts on the FTSE MIB index
	Stock options	IDEM Equity	Options contracts on individual shares
	Weekly stock options	IDEM Equity	Weekly option contracts on individual shares

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

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

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

where:

- [root] = Product/Underlying code (Class Symbol Root), max. 6 chars (e.g. FIB for FTSE MIB futures)
- [year] = 1 char, corresponding to the last digit of the year (e.g. “7” for 2017)
- [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 = miniFutures 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) - Italy Area
- IDEBQ = future on the quarterly contract “Baseload” (IDEX) - Italy Area
- IDEBY = future on the yearly contract “Baseload” (IDEX) - Italy Area
- IDEPM = future on the monthly contract “Peakload” (IDEX) - Italy Area
- IDEPQ = future on the quarterly contract “Peakload” (IDEX) - Italy Area
- IDEPY = future on the yearly contract “Peakload” (IDEX) - Italy Area
- GDEBM = future on the monthly contract “Baseload” (IDEX) - Germany/Austria Area
- GDEBQ = future on the quarterly contract “Baseload” (IDEX) - Germany/Austria Area
- GDEBY = future on the yearly contract “Baseload” (IDEX) - Germany/Austria Area
- GDEPM = future on the monthly contract “Peakload” (IDEX) - Germany/Austria Area
- GDEPQ = future on the quarterly contract “Peakload” (IDEX) - Germany/Austria Area
- GDEPY = future on the yearly contract “Peakload” (IDEX) - Germany/Austria Area
- DWHEAT = future on durum wheat (AGREX)
- with reference to all the underlying “Tickers” of stock futures and options traded on IDEM Equity:
    - for single stock dividend futures, a “1” precedes the underlying “Ticker”
    - for stock futures cash settled, a “2” precedes the underlying “Ticker”
    - for stock option European physical Settled “3” precedes the underlying “Ticker”
    - for stock option European cash Settled a “4” precedes the underlying “Ticker”
- for Weekly MIBO and Weekly Stock Options:
    - first week: “1W” follows the Underlying “Ticker”
    - second week: “2W” follows the Underlying “Ticker”
    - fourth week: “4W” follows the Underlying “Ticker”
    - fifth week: “5W” follows the Underlying “Ticker”.

Description	Suffix for Class Symbol - Weekly series (following Underlying "Ticker")	Suffix for Underlying Symbol - Weekly MIBO (following Underlying "Ticker")	Suffix for Underlying Symbol - Weekly stock option (following Underlying "Ticker")
Week 1	1W	1W	V
Week 2	2W	2W	W
Week 4	4W	4W	Y
Week 5 (when applicable)	5W	5W	Z

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.

a.1) Examples for the IDEM Equity segment

- Call option on the FTSE MIB index, expiry March 2018 @ strike = 20.000 (index points)

  → Series name: MIBO8C20000

#	Code	Description
[root]	MIBO	Option on the FTSE MIB Index
[year]	8	Call expiry: March 2018
[month]	C	
[strike]	20000	Strike Price: 20.000 index points

- Put option on the FTSE MIB index, expiry March 2018 @ strike = 20.000 (index points)

  → Series name: MIBO8O20000

#	Code	Description
[root]	MIBO	Option on the FTSE MIB Index
[year]	8	Put expiry: March 2018
[month]	O	
[strike]	20000	Strike Price: 20.000 index points

- Future on the FTSE MIB index, expiry March 2018

  → Series name: FIB8C

#	Code	Description
[root]	FIB	Future on FTSE MIB Index
[year]	8	Expiry: March 2018
[month]	C	

- Call option on ENI shares, expiry March 2018 @ strike = 15 euro

  → Series name: ENI8C15

#	Code	Description
[root]	ENI	Underlying: ENI
[year]	8	Call expiry: March 2018
[month]	C	
[strike]	15	Strike Price: €15

- Put option on ENI shares, expiry March 2018 @ strike = 15 euro

  → Series name: ENI8O15

#	Code	Description
[root]	ENI	Underlying: ENI
[year]	8	Put Expiry: March 2018
[month]	O	
[strike]	15	Strike Price: €15

- Stock future on ENI shares, expiry March 2018

  → Series name: ENI8C

#	Code	Description
[root]	ENI	Underlying: ENI
[year]	8	Expiry: March 2018
[month]	C	

a.2) Examples for the IDEX segment

- Yearly “baseload” contract, expiry December 2018

  → Series name: IDEBY8L

#	Code	Description
[root]	IDEBY	Underlying: yearly “baseload” Contract - Italy area
[year]	8	Expiry December 2018
[month]	L	

- Yearly “baseload” contract, expiry December 2018

  → Series name: GDEBY8L

#	Code	Description
[root]	GDEBY	Underlying: yearly “baseload” Contract - Germany/Austria area
[year]	8	Expiry December 2018
[month]	L	

- Monthly “baseload” future contract, expiry March 2018

  → Series name: IDEBM8C

#	Code	Description
[root]	IDEBM	Underlying: monthly “baseload” Contract - Italy Area
[year]	8	Expiry March 2018
[month]	C	

- Monthly “baseload” future contract, expiry March 2018

  → Series name: GDEBM8C

#	Code	Description
[root]	GDEBM	Underlying: monthly “baseload” Contract - Germany/Austria Area
[year]	8	Expiry March 2018
[month]	C	

- Quarterly “Peakload” future contract, expiry March 2018

  → Series name: IDEPQ81

#	Code	Description
[root]	IDEPQ	Underlying: quarterly “Peakload” contract - Italy Area
[year]	8	First quarter of 2018
[quarter]	1	

- Quarterly “Peakload” future contract, expiry March 2018

  → Series name: GDEPQ81

#	Code	Description
[root]	GDEPQ	Underlying: quarterly “Peakload” contract - Germany/Austria area
[year]	8	First quarter of 2018
[quarter]	1	

a.3) Examples for the AGREX segment

- Future on the Durum Wheat contract, expiry March 2018

  → Series name: DWHEAT8C

#	Code	Description
[root]	DWHEAT	Underlying: Durum wheat
[year]	8	Expiry: March 2018
[month]	C	

b. 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 (as detailed in the Borsa Italiana's Rules and related Instructions).

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.

Available Strategies are defined in the Borsa Italiana's Rules and related Instructions.

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

b.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 miniFutures, 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 Series Name for Standard Combination (time spreads) Series is defined according to the following naming scheme:

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

where:

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

  - Time spread on FTSE MIB index future (long June 2018, short March 2018)

    → Series name: FIB8FT

#	Code	Description
[root]	FIB	Underlying: FTSE MIB index
[year long leg]	8	Expiry of the first leg of the strategy (long position): June 2018
[month long leg]	F	
[flag of Time spread]	T	Flag for Standard Combinations

b.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 four;
- Series within the same FLEXCO order must have the same contract size;
- the maximum ratio that can be associated to a single leg is 100 (unless differently communicated via Borsa Italiana's Notices).

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:

- 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 Series Name for FLEXCO is defined according to the following naming scheme:

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

where:

- [root] = Product/Underlying Ticker max. 6 chars (e.g. FIB for FTSE MIB index futures)
- [identification code] = 4 chars, equal to "_FC_" (FLEXCO identification code);
- [identification group] = 2 chars, Instrument Group ID
- [identification number] = unique incremental identifier by instrument group assigned to FLEXCO series (4 chars)

Here following an example of the Series Name for a FLEXCO:

- FLEXCO on ENI shares

  → Series name: 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

b.3) IDEX FLEXCO: Location Spread

IDEX Flexible Combinations (“FLEXCO”) represent combinations of Series of Standard Contracts that Exchange will list and Member Firms can trade. For IDEX Location Spread, implied dissemination is turned off.

The Series Name for IDEX FLEXCO is defined according to the following naming scheme:

[root Instrument 1]	[root Instrument 2]	[Exp Year]	[Month Code]

Here following an example of the Series Name for an IDEX FLEXCO:

- FLEXCO on Italy vs. Germany monthly baseload contract

  → Series name: IDEBM_GDEBM_8K

#	Code	Description
[root Instrument 1]	IDEBM	Baseload monthly Italy area
[root Instrument 2]	GDEBM	Baseload monthly Germany/Austria area
[Exp Year]	8	Expiration on year 2018
[Month Code]	K	Expiration Month Code for November

- FLEXCO on Italy vs. Germany monthly peakload contract

  → Series name: IDEPM_GDEPM_8K

#	Code	Description
[root Instrument 1]	IDEPM	Peakload monthly Italy area
[root Instrument 2]	GDEPM	Peakload monthly Germany/Austria area
[Exp Year]	8	Expiration on year 2018
[Month Code]	K	Expiration Month Code for November

- FLEXCO on Italy vs. Germany quarterly baseload contract

  → Series name: IDEBQ_GDEBQ_81

#	Code	Description
[root Instrument 1]	IDEBM	Baseload quarterly Italy area
[root Instrument 2]	GDEBM	Baseload quarterly Germany/Austria area
[Exp Year]	8	Expiration on year 2018
[Month Code]	1	Expiration Quarterly Code -> 1st quarter

- FLEXCO on Italy vs. Germany quarterly peakload contract

  → Series name: IDEPQ_GDEPQ_82

#	Code	Description
[root Instrument 1]	IDEPM	Peakload monthly Italy area
[root Instrument 2]	GDEPM	Peakload monthly Germany/Austria area

#	Code	Description
[Exp Year]	8	Expiration on year 2018
[Month Code]	2	Expiration Quarterly Code -> 2nd quarter

- FLEXCO on Italy vs. Germany yearly baseload contract

  → Series name: IDEBY_GDEBY_8L

#	Code	Description
[root Instrument 1]	IDEBM	Baseload quarterly Italy area
[root Instrument 2]	GDEBM	Baseload quarterly Germany/Austria area
[Exp Year]	8	Expiration on year 2018
[Month Code]	L	Expiration Month Code for December

- FLEXCO on Italy vs. Germany yearly peakload contract

  → Series name: IDEPY_GDEPY_8L

#	Code	Description
[root Instrument 1]	IDEPM	Peakload monthly Italy area
[root Instrument 2]	GDEPM	Peakload monthly Germany/Austria area
[Exp Year]	8	Expiration year on 2018
[Month Code]	L	Expiration Month Code for December

3.2 Trading Phases

Available Trading Phases for the IDEM market are defined in the Borsa Italiana's Rules and related Instructions. Table 1 below provides a summary of the Trading Phases of the IDEM market.

Table 1 - Trading Phases for IDEM Equity / IDEX / AGREX segments

Trading Phase		Time interval	IDEM Equity segment FIB and miniFIB	IDEM Equity segment All other products	IDEX segment	AGREX segment
Opening Auction	Pre-Opening	8:30am - 9:00am[2]	Yes	-	-	-
	Validation	Immediate[3]	Yes	-	-	-
	Opening	Immediate[3]	Yes	-	-	-
Continuous Trading[4]		9:00am - 8.30pm	Yes	-	-	-
		9:00am - 5:50pm	-	Yes	-	-
		9:00am - 5:40pm	-	-	Yes	-
		2:30pm - 5:40pm	-	-	-	Yes

[2] It refers to a randomly selected second between 9:00 and 9:00:59am.
[3] Immediately after the end of the previous Trading Phase.
[4] It starts immediately after the end of the Opening Auction Phase.

Trading Phases are implemented in the SOLA system by associating, in each moment of the trading day, an appropriate Instrument Group State 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 States and Instrument Series States and their related associated actions is provided in paragraphs 4.3 and 4.4.

3.3 Order Types

The following Order Types are supported by the SOLA system for the IDEM market (please refer to Borsa Italiana's Rules and related Instructions, 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 Negotiated Transactions, to be executed between 2 pre-determined counterparts (*Committed Cross Orders*) or within the same counterparty (*Internal Cross Orders*). Orders to execute Negotiated Transactions can also be submitted by Non-Executing Brokers in the name and on behalf of two pre-determined counterparties (Committed Cross Orders only).
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.

3.4 Tick sizes

Prices on IDEM contracts can vary change according to the tick table summarised below. For details, please refer to the Borsa Italiana's Rules and related Instructions.

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

IDEM Equity - Index based contracts

Short Name	Instrument Type	Tick
IF	FTSE MIB index futures	5
	FTSE MIB index miniFutures	5
IO	FTSE MIB index options *(depending on premium value)*	1 (1 - 99)
		2 (100 - 498)
		5 (≥ 500)
IW	FTSE MIB index Weekly Options	1
DV	FTSE MIB Dividend index futures	1

IDEM Equity - Stock based contracts

Short Name	Instrument Type	Tick
EF	Stock futures	0.0001
	Pan European Stock futures	0.0001
EO	Stock options	0.0001 (if premium ≤ €0.005) 0.0005 (if premium > €0.005)
	Weekly stock options	
DF	Single Stock Dividend futures	0.0001

IDEX contracts

Short Name	Instrument Type	Tick
XF	IDEX futures	0.01

AGREX contracts

Short Name	Instrument Type	Tick
AG	AGREX futures	0.25

3.5 Mifid 2 Market Makers, Voluntary Market Makers and Specialists

Each Member Firm is assigned (at least) a unique identification code (TraderID). Traders of a Member Firm may use any User of the Member Firm to which they belong.

Member Firms pursuing a “market making strategy”, as defined in Regulation 2017/578/UE, are required to sign a dedicated “market making agreement”, according to Borsa Italiana’s Rules and related Instructions (“Mifid 2 Market Maker”).

Member Firms can voluntarily apply to perform the role of Voluntary Market Maker, Specialist or Mifid 2 Market Maker.

Mifid 2 Market Makers, Voluntary Market Makers and Specialists are subject to specific quantity, spread and time presence obligations on defined group(s) of Instrument Series. Voluntary Market Makers and Specialists are also provided specific pricing schemes for their trading activity.

Dedicated TraderIDs are assigned to Mifid 2 Market Makers, Voluntary Market Markets and Specialists (with specific naming convention), allowing those submitting orders and/or quotes on the instruments they are committed to quantity, spread and time presence obligations.

Member Firms are required to submit orders and/or quotes under their market making agreement through these specific TraderIDs.

The following roles are available on the IDEM market. For full details on obligations for Mifid 2 Market Makers, Voluntary Market Makers’ and Specialists, please refer to the Borsa Italiana’s Rules and related Instructions.

Role		Obligations	Dedicated TraderID naming convention[1]
Mifid 2 Market Maker		continuous quoting obligations, on proprietary account	*0123*/**LP**1
Voluntary Market Makers	Primary Market Maker (PMM)	continuous quoting obligations, on proprietary account	*0123*/**MM**1
	Market Maker (MM)	answer to Indication of Interest to trade, on proprietary account	
	Liquidity Provider (LP)	continuous quoting obligations, on proprietary account and on a reduced number of and expirations underlying (or of days in the AGREX segment) in comparison with PMMs	
	Designated Market Maker (DMM)	continuous quoting obligations, on proprietary account	
	Extended Market Maker (EMM)	continuous quoting obligations, on proprietary account (in the evening session only, just for index futures)	*0123*/**EH**1
Specialists	Primary Specialist (PS)	continuous quoting obligations, on agency account, on a reduced number of underlying and expirations (or of days in the AGREX segment), in comparison with PMMs	*0123*/**SP**1
	Specialist (S)	answer to Indication of Interest to trade, on agency account	
	Liquidity Providers Specialist (LPS)	continuous quoting obligations, on agency account and on a reduced number of underlying and expirations in comparison with PMMs	
	Designated Specialist (DS)	continuous quoting obligations, on agency account	
	Extended Specialist (ES)	continuous quoting obligations, on proprietary account (in the evening session only, just for index futures)	*0123*/**ES**1

[1] The first 4 characters correspond to the Member ID; the 5th character corresponds to the Exchange ID; the last character is numerical, incremental by Member ID.

3.6 Non-Executing Broker (NEB)

IDEM market allows Members registered in the capacity of Non-Executing Broker (NEB) to enter pre-arranged trades via cross and/or block trades in the name and on behalf of two or more predetermined counterparties (not including itself).

SOLA trading platform supports Third Party Order execution by NEBs via SAIL / FIX protocols, as described in paragraph 5.2 of this document. In addition, for IDEX segment only, support to NEB is also provided via a dedicated Front End, available via HTTPS too.

In particular, NEB submitting a Committed Cross Order in the name and on behalf of two pre-determined counterparties must indicate, amongst all other relevant parameters that define the order, the Firm ID and the TraderIDs of both counterparties.

Only IDEM Members registered in the capacity of NEB will be allowed to enter pre-arranged trades as described above for products listed on the related IDEM segments.

4. 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 phase's 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.

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 (N/NF/NS) and Instrument Keys (J/JF/JS) messages disseminate IDEM market reference data. These messages are sent at the start of the day and in the following circumstances:

i. Summary messages (N/NF/NS) are sent:
   - at the beginning of the day to list the tradable instruments for the current day. These messages contain trading relevant data such as Open Interest, Previous day Settlement Price and Closing Prices;
   - after a trade cancellation. These messages will contain some statistics among which High, Low, Volume, Last Price;
   - at calculation of the settlement prices by the Clearing house;
   - at the end of the evening session. These messages will contain relevant data for the next day such as Closing Price calculated by the trading system, Settlement Prices and Open Interest calculated by the Clearing House, trading statistics (High, Low, Last, Volume);
   - during the day if a new instrument is added.

ii. Instrument Keys (J/JF/JS) messages are sent:
   - at the beginning of the trading day;
   - during the day if a new instrument is added;
   - during the day whenever the Exchange changes the Instrument control price. These messages contain minimum and maximum price thresholds.

4.2 Instrument Groups

An Instrument Group is a set of Instruments Series governed by the same trading rules, according to the Borsa Italiana's Rules and related Instructions. 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. In particular:

- the Instrument Group States from "a" to "h" are associated to the pre-defined time intervals during the daily trading session;
- the time intervals for Instrument Group States from "b" to "e" correspond to the time intervals for the Trading Phases defined in the Borsa Italiana's Rules and related Instructions;
- the "Interrupted" and "Forbidden" Instrument Group States are activated manually by Borsa Italiana under specific circumstances.

Each Instrument Group State is described below.

Trading Phase	IDEM Equity segment FIB and miniFIB	IDEM Equity segment All other products	IDEX segment	AGREX segment
a. Start of Consultation	7:30am - 8:00am			
b. Intervention Before Opening (or "Order Cancellation")	8:00am - 8:30am	8:00am - 9:00am	8:00am - 9:00am	8:00am - 2:30pm
c. Pre-Opening	8:30am - 9:00am[5]	-	-	-
d. Opening	Immediate[6]	-	-	-
e. Continuous Trading	9:00am[7] - 8.30pm	9:00am - 5:50pm	9:00am - 5:40pm	2:30pm - 5:40pm
f. Exchange Intervention	8:30pm - 8:45pm	5:50pm - 6:20pm	5:40pm - 6:10pm	5:40pm - 6:10pm
g. End of Consultation	8:45pm - 9:00pm	6:20pm - 7:00pm	6:10pm - 7:00pm	6:10pm - 7:00pm
h. Mini Batch	9:00pm - EOD*	7:00pm - EOD*	7:00pm - EOD*	7:00pm - EOD*
i. Forbidden				
j. Interrupted				

** EOD (End Of Day) is a Technical Phase.*

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;
- 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.

a. Start of Consultation

- *All IDEM products: 7:30am - 8:00am*

SOLA does not notify clients of the switch of Instrument Groups to the "Start of Consultation" State. Only Borsa Italiana can operate on Instrument Groups in this State (no action is available to Market Members).

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

During this State, 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.

b. Intervention Before Opening (*Order Cancellation*)

- *FTSE MIB index futures and FTSE MIB index miniFutures: 8:00am - 8:30am*
- *All other IDEM Equity products and IDEX segment: 8:00am - 9:00am*
- *AGREX segment: 8:00am - 2:30pm*

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

[5] 9:00am refers to a randomly selected second between 9:00 and 9:00:59am.
[6] It is activated immediately after the end of the Pre-Opening State.
[7] It is activated immediately after the end of the 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.

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.

c. Pre-Opening

- *FTSE MIB index futures and FTSE MIB index miniFutures only: 8:30am - 9:00am (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.

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).

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

SOLA notifies all clients via HSVF with one message for each Instrument Group that switches to the "Pre-Opening" State. In case there is one Bid and one Ask at the same price in the book during Group State Pre-opening or Instrument in Reserved state:

- the first level is displaying the TOP as an aggregated price level;
- if there are market orders in the book, the TOP level is split in the following levels as per below:
    - the side(s) of the book with market order(s) contributing to the TOP level will display in the second level the aggregated market order price(s) (OUV);
    - following level will display aggregated limit order(s) contributing to the TOP;
- further levels will display the additional prices that would not match the TOP.

c.1) 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 (please refer to the Borsa Italiana's Rules and related Instructions):

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 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 minimized the unfilled quantity then the TOP range start 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
- The remaining quantity of the market order will be booked at €1.25

d. Opening

- *Available for FTSE MIB index futures and FTSE MIB index miniFutures only*

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

e. Continuous Trading

- *FTSE MIB index futures and FTSE MIB index miniFutures: 9:00am - 8:30pm*
- *All other IDEM Equity products: 9:00am - 5:50pm*
- *IDEX segment: 9:00am - 5:40pm*
- *AGREX segment: 2:30pm - 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.

Orders are associated and trades executed in real-time, following Price-Time priority rules (please refer to the Borsa Italiana’s Rules and related Instructions). All actions on orders (including internal/committed cross orders) and quotes (including Request for Quotes) are available to Market Members on Instrument Groups in the “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).

f. Exchange Intervention

- *FTSE MIB index futures and FTSE MIB index miniFutures: 8:30pm - 8:45pm*
- *All other IDEM Equity products: 5:50pm - 6:20pm*
- *AGREX and IDEX segments: 5:40pm - 6.10pm*

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

Market Members on Instrument Groups in "Exchange Intervention" and Borsa Italiana are entitled to perform Order cancellations (see Table 2).

g. End of Consultation

- *FTSE MIB index futures and FTSE MIB index miniFutures: 8:45pm - 9:00pm*
- *All other IDEM Equity products: 6:20pm - 7:00pm*
- *AGREX and IDEX segments: 6.10pm - 7:00pm*

No data information is broadcasted.

This phase is reserved for Borsa Italiana which, for the purposes of managing the system, is entitled to perform Order cancellations (see Table 2) when the Instrument Group is in "End of Consultation" State.

h. Mini Batch

- *FTSE MIB index futures and FTSE MIB index miniFutures: 9:00pm - EOD*
- *All other IDEM Equity products: 7:00pm - EOD*
- *AGREX and IDEX segments: 7:00pm - EOD*

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).

i. 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.

j. 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. An 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.

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.

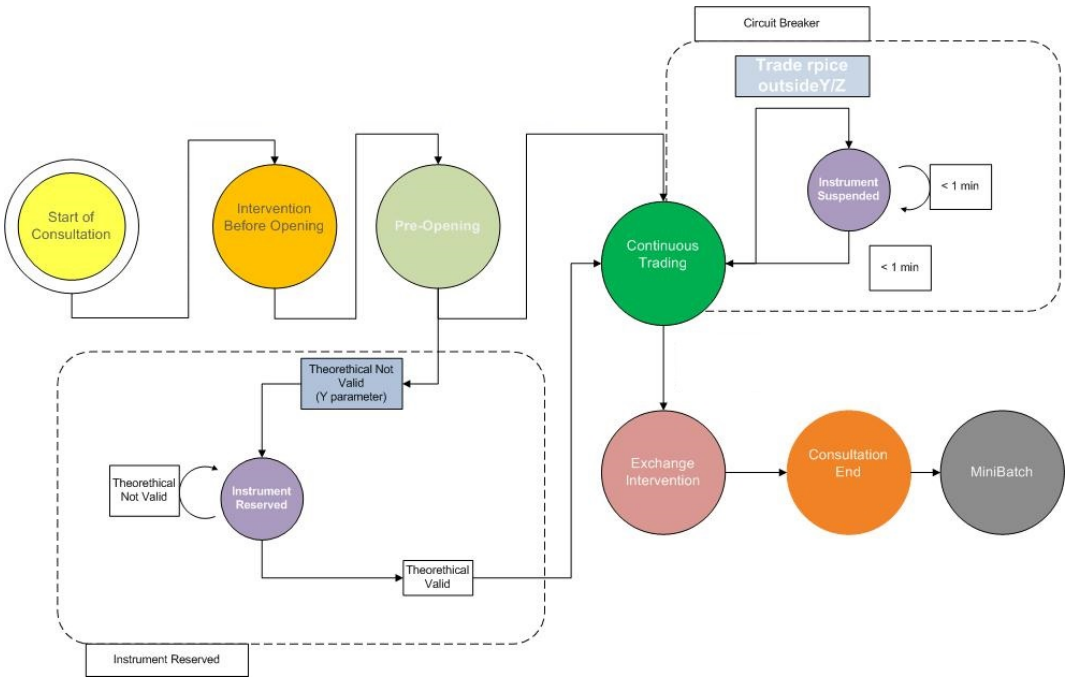
Table 2 summarises the actions allowed under each Instrument Group State and each Instrument Series State.

Table 1 - 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
-	Start of Consultation	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Intervention Before Opening	NO	NO	YES[2]	NO	NO	NO	NO	NO	NO
-	Pre-Opening	YES	YES	YES	NO	YES	YES	YES	NO	NO
-	Opening	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Continuous Trading	YES	YES	YES	YES	YES	YES	YES	YES	YES
-	Exchange Intervention	NO	NO	YES	NO	NO	NO	NO	NO	NO
-	End of Consultation	NO	NO	YES[1]	NO	NO	NO	NO	NO	NO
-	Mini Batch	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Post Trading									
-	Interrupted	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Forbidden	NO	NO	YES[1]	NO	NO	NO	NO	NO	NO
-	Instrument Forbidden	NO	NO	NO	NO	NO	NO	NO	NO	NO
-	Reserved	YES	YES	YES	NO	YES	YES	YES	NO	NO
-	Suspended	NO	NO	YES[2]	NO	NO	NO	YES[2]	NO	NO

[1] *Reserved to Borsa Italiana only.*
[2] *Available to IDEM Members.*

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



a. 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 Communication of stress market conditions (SMC)

The SOLA Trading System disseminates messages via HSVF containing indication for market participants to handle "stressed market conditions" that are declared under specific circumstances by trading venues under Mifid 2. For the full description of the conditions under which SMC are triggered by the Trading Venue, and specific market making obligations during SMC, please refer to the "Guide to the Parameters".

HSVF BULLETTIN (L) messages are disseminated at Underlying level or Instrument Type in case SMC are declared by the Trading Venue.

The BULLETTIN message includes indication of the relevant Instrument Group ID and the specific event signaled by the message. The possible events are:

- Start of SMC: market making obligations are temporarily disabled until the trigger of Stressed Market Obligations (SMO). Please note that SMO might be triggered immediately after SMC trigger;
- Start of SMO: start of Stressed Market Obligations (reduced obligations according to Borsa Italiana's Rules and related Instructions);
- End of SMO: end of Stressed Market Obligations. Normal market making obligations are resumed;
- End of SMC: end of SMC declaration.

4.6 Strike generation rules

The system automatically manages the updating of the Series of option Contracts available for trading on IDEM, according to the Borsa Italiana's Rules and related Instructions.

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 FTSE MIB index weekly options contracts there are 21 price levels with interval of 100 index points.

For stock option contracts for each series up to one year (monthly and quarterlies) there are at least 15 price levels available on calls and puts, 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.

4.7 Adjustment of stock options, stock futures and single stock dividend futures

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";
- 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. 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 OE message. This message will contain the Client's User Sequence ID.

Key information to be specified in OE message is reported below. Please refer to Appendix 1 for regulatory information to be specified at order entry, as concerns reporting obligations to trading venues introduced by Mifid 2. SOLA performs validation on the parameters of the 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)
- 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, client also receives a LEG EXECUTION NOTICE (NL) messages providing additional information related to the price and quantity at which each 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 OE message:

Table 3 - Available Parameters in the SAIL OE message

	Parameter	Available values	Comments	Relevant FIX Tag(s)
-	Instrument Series ID		Instrument identification within a Group and Group ID	55 (Symbol)
-	Side	B; S	Buy or Sell	54 (Side)
-	Price Type	Limit; Market; Top; Committed	See paragraph “Price Type parameters”	40 (OrdType)
-	Price		To be defined if the Price Type is set to “Limit” or “Committed”. See paragraph “Price parameters”	44 (Price)
-	Quantity		Number of contracts or shares	38 (OrderQty)
-	Minimum Quantity (group)		Includes 2 sub-fields. See paragraph ”Quantity Term and Additional Quantity parameters”	110 (MinQty)
	Quantity Term	Minimum; Disclosed	(Optional)	Not Available
	Additional Quantity		(Optional). To be defined only when the Quantity Term is set to “Minimum” or “Disclosed”	110 (MinQty); 210 (MaxShow)
-	Duration Type	Day; Good Till Day; Good Till Cancellation; Immediate; Good Till Connected	See paragraph ” Duration Type parameters”	59 (TimeInForce)
-	Stop (Group)		For Stop Orders only. See paragraph “Stop parameters”	40 (OrdType) set to ‘4’: Stop Order ‘3’: Stop Market Order ‘W’: Stop U.S Marker Order
	Additional Price		(Optional)	99 (StopPx)
	Special Price Term	Stop; Stop on Bid; Stop on Ask; If Touched; If Touched on Bid; If Touched on Ask	(Optional)	5255 (StopPxCondition)
-	Clearing Data (group)		Includes two sub-fields. See paragraph “Clearing Data parameters”	1 (Account), 8001 (Account Profile
	Position	Open; Close		77 (Open/Close)
	Account Type	House; Client; Matched Principal		47 (Rule80A)
-	Owner data (group)		Includes two sub-fields. See paragraph “Owner Data parameter”	58 (Text)
	Client Order ID		(Optional). Free-text field (24 characters)	First 24 characters of 58 (Text)
	Client Reference ID		(Optional). Free-text field (26 characters)	Last 26 characters of 58 (Text)

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

a. Price Type parameters

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

- “L”: for Limit Orders;
- “O”: Opening;

- "W": for Market Orders;
- "M": for Top Orders[8] (or "At Best Opposite Price");
- "C": for Committed Orders[9].

a.1) Limit Orders

Limit Orders are submitted by setting the Price Type field of the 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.

a.2) Market Order

Market Orders are submitted by setting the Price Type field of the 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 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.

a.3) Top Order (or "At Best Opposite Price")

Top Orders are submitted by setting the Price Type field of the 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)

[8] From a regulatory perspective, a Top Order is a Market Order with a particular execution algorithm.
[9] Cross Orders are executed with a specific message type ("OX"). See paragraph 5.2.

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.

a.4) Committed Cross Orders

Committed Cross Orders are a special orders type dedicated to Negotiated Transactions, and are submitted by setting the Price Type field of the OE message to “C”.

For more details on functionality available to execute Negotiated Transactions in the IDEM Trading System, please refer to paragraph 5.2.

b. Price parameters

The Price parameter must be specified for Limit Orders and for Negotiated Transactions (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 Negotiated Transactions, it indicates the pre-arranged price at which the Negotiated Transaction will be executed.

The inserted Price must be consistent with the relevant tick size.

c. 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” (please, refer to the Borsa Italiana’s Rules and related Instructions).

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 “Duration Type parameters”).

c.1) 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.

c.2) 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 minimum notional value for iceberg orders is set to €10,000 while the peak size 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.

c.3) 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).

d. Duration Type parameters

The following values can be specified for the “Duration Type” filed of the OE message:

- “J”: for “Day”;
- “D”: for “Good Till Day”;
- “F”: for “Good Till Cancelled”; (till expiration)
- “E”: for “Immediate Orders”;
- “W”: for “While Connected Orders”.

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

d.1) Day

A Day Order is submitted by setting the Duration Type field of the 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.

d.2) Good Till Day (“GTD”)

A GTD Order is submitted by setting the Duration Type field of the OE message to “D”. GTD orders require setting 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.

d.3) Good Till Cancelled (“GTC”)

A GTC Order is submitted by setting the Duration Type field of the 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.

d.4) Immediate Orders ("IOC")

An Immediate order (also known as "Immediate or Cancel") is submitted by setting the Duration Type field of the 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.

d.5) 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:

- 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.

d.6) While Connected Orders

A "While Connected" order is submitted by setting the Duration Type field of the 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).

e. Stop parameters

The IDEM Trading System provides a centralised management of the "Stop Loss" functionality (please refer to the Borsa Italiana's Rules and related Instructions).

The Stop Loss functionality is activated specifying some additional parameters within the OE message.

For the purposes of this paragraph, orders submitted with an activated "Stop Loss" functionality will be referred to as "Stop Orders".

e.1) 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 Systems 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 they refer to (the "Order Series"), until the price ("Stop Price") of an Instrument Series chosen by the Member Firm at the order entry (the "Stop Series") is reached.

e.2) Limitations

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

- the Stop Series must coincide with the Order Series;
- Stop Order functionalities are available for Single Orders only;
- the Time Validity parameter for Stop Orders can be set as “Day”, “While Connected” or “GTC” (refers to the order that enters the order book in case the price condition is triggered).
- Inactive or unexecuted Stop Orders at the close of the current trading day are automatically cancelled.

e.3) Additional order parameters for Stop Orders

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

- ***Additional Price*****:** it is the value that the price of the Stop Series must reach in order to trigger the activation of the Stop Order;
- ***Special Price Term*****:** it 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

f. Clearing Data parameters

f.1) Position parameter

Member Firms are required to define via the Position parameter if the order entered in the trading system is related to:

- the creation of a new position (“Open”) - O, or
- 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.

f.2) Account Type parameter

Member Firms are required to indicate, at order entry level and by means of the Account Type field, the trading capacity of each order, according to one of the following values:

- own account: “House”, or
- third party’s account: “Client”, or
- matched principal account: “Matched Principal”.

Orders sent to execute a Negotiated Transaction will not be accepted by the trading system if the Account Type field on buy vs. sell side is:

- House vs. House, or
- House vs. Matched Principal, or
- Matched Principal vs. House, or
- Matched Principal vs. Matched Principal.

Quotes must always be marked as “House” for Market Makers and “Client” for Specialists.

f.3) 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.

g. Owner Data parameter

The “Owner Data”, composed by two sub-fields (the “Client Order ID” and the “Client Reference ID”), is a parameter available at order entry level as two free-text sub-fields (with a length respectively of 24 and 26 characters[10]) allowing storing the order date, a proprietary order identification number or any other information considered relevant by the Member Firm.

5.2 Negotiated Transactions

The IDEM Trading System supports orders aimed at executing a trade against a pre-determined counterparty, i.e. Negotiated Transaction. Negotiated Transactions do not interact with the Instrument Series’ order book and their prices are not subject to the Y and Z validation procedures described in the paragraph “Dynamic price deviation controls and Circuit Breakers”. Negotiated Transactions still unmatched by the designated counterparty at the close of the current trading session are automatically cancelled.

a. Categories

Following categories are available for Negotiated Transactions (according to the Borsa Italiana’s Rules and related Instructions):

a.1) Internal Cross Order

The Internal Cross Order allows executing a trade where the two counterparties are represented by a unique Member Firm. An Internal Cross Order is submitted by such Member Firm through the “OX” message.

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 Negotiated Transaction. The Negotiated Transaction is immediately executed, given that the price validation controls described in the following paragraph are fulfilled. The price validation control is performed at order entry.

a.2) Committed Cross Order

The Committed Cross Order allows executing 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 Cross Order is submitted by setting the Price Type field of OE message to “C”.

For Committed Cross Orders, order entry must be done by both the counterparties of the Negotiated Transaction. The central system keeps the first order received in a dedicated private archive until the corresponding order of the Negotiated Transaction has been submitted by the other counterparty. If the two orders fully match and the quantity, notional value and price controls described in the following paragraph are fulfilled, the trade is executed. The price validation controls are performed two times, at order entry of the Negotiated Transaction, by each counterparty.

[10] The first 12 characters of the “Client Reference ID” are sent to the Clearing House (i.e. CC&G).

a.3) Bundle Orders (BO) functionality (Negotiated Transactions with up to four legs)

IDEM facilitates the grouping of multiple orders to execute Negotiated Transactions into one unique window through the Bundled Order (BO) functionality. This functionality offers certainty of simultaneous execution of all the individual legs included in the Negotiated Transaction, or no execution at all. The functionality is highly customisable, allowing market participants to create their Negotiated Transactions with the same or different counterparty and same or different financial instruments in each leg, as well as an individual price for each leg[11].

The BO functionality offers an alternative to the Strategy functionality, whilst providing additional flexibility as described below. In particular, a Member:

- can enter a Negotiated Transaction in up to four legs;
- can independently specify for each leg of the Negotiated Transaction:
  - the financial instrument;
  - the price and size;
  - the counterparty;
  - buy or sell.
- must use the same TraderID for each leg of the Negotiated Transaction.

Once the Negotiated Transaction is entered, each counterparty will receive a notification message. On receipt, counterparties will be able to submit acceptance of its Leg of the Negotiated Transaction, or reject it. In case of rejection from one of the counterparties, acceptance by any other counterparty of the Negotiated Transaction will be prohibited. Pending legs will remain in the system till the close of the trading day until they are all accepted. The Negotiated Transaction will be registered and sent to clearing only on acceptance of all of the counterparties. Quantity/notional value and price controls are also applicable.

a.4) Third Party Order execution functionality via SAIL / FIX protocols

Members registered in the capacity of NEB can initiate electronically the execution process by entering a Negotiated Transaction via the Third Party Order execution functionality and each counterparty will receive a notification message with no disclosure of the other counterparties' names (only NEB name will be visible).

NEB can submit a Committed Cross Order or use Bundle Order (BO) functionality with specifications details above.

Once proposal has been received, each counterparty will be able to submit acceptance of its own leg of the Negotiated Transaction, or reject it.

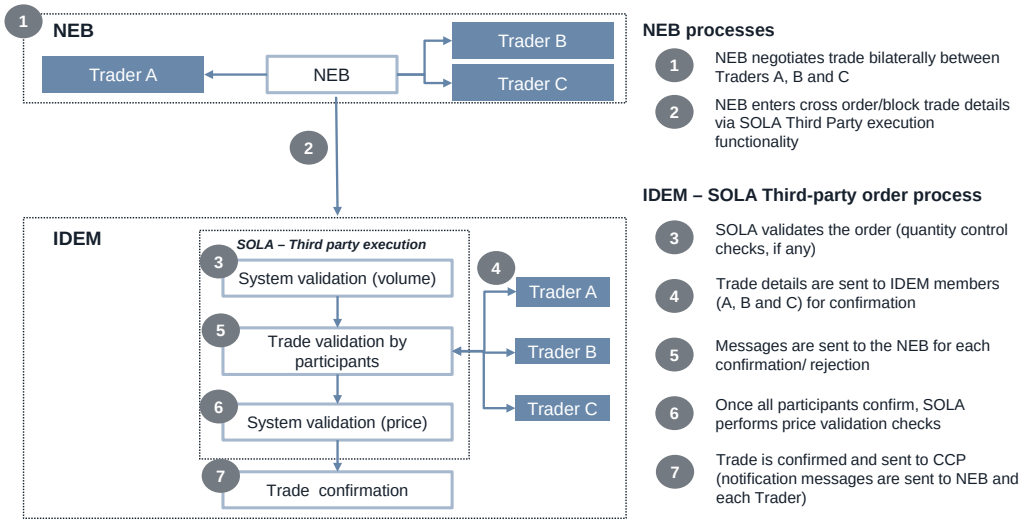
In case of rejection from one of the counterparties, acceptance by any other counterparty of the Negotiated Transaction will be inhibited.

Pending legs will remain in the system till the close of the trading day until they are all accepted.

The Negotiated Transaction will be registered and sent to clearing only on acceptance from all counterparties.

The market model applied to each leg of the Negotiated Transaction submitted via Third Party Order execution functionality mirrors the one for Negotiated Transaction described below in terms of quantity/notional value and price controls.

[11] The counterparty entering a Negotiated Transaction through BO functionality must be buyer or seller of each leg included in the BO.



b. Quantity/notional value and price controls for Negotiated Transactions

Negotiated Transactions are subject to quantity/notional value and price controls before the execution of a trade. In case one of these controls fails, the Negotiated Transaction is not executed and a message is returned to both the counterparties of the trade.

In relation to quantity/notional value controls applied to Negotiated Transactions, the Exchange defines, at Instrument Group level, the following:

- the minimum quantity/notional value allowed, communicated via Borsa Italiana's Notice (consistently with the applicable Mifid 2 Pre-trade Large-In-Scale (LIS) thresholds), and
- the maximum quantity/notional value allowed.

With regards to price controls, those are differentiated at Instrument Group level, depending on the size of the Negotiated Transaction, in particular:

- for Negotiated Transactions with quantity/notional value above the minimum required threshold but below the Exchange defined "minimum quantity for outside BBO"[12], the price must be within the best bid and ask (BBO) spread available on the order book (including limits);
- for Negotiated Transactions with size above the Exchange defined "minimum quantity for outside BBO", a price interval around the BBO spread is available.

In case no BBO spread is available on the Instrument Series order book, price controls will be performed against:

- last trade price +/- a certain percentage, if available, otherwise
- reference price +/- a certain percentage.

Quantitative parameters for Negotiated Transactions on each product traded on the IDEM market (in particular, i) minimum quantity; ii) minimum quantity for outside BBO; iii) maximum allowed divergence from BBO/last trade price/reference price; iv) maximum quantity and notional value) are defined in the "Guide to the Parameters". A synthesis is reported in the table below.

[12] For certain products, the minimum quantity/notional value allowed coincides with the minimum quantity for outside BBO.

Table 3: Quantity/notional value and price controls for Negotiated Transactions on IDEM products

Contract		Quantity / notional value controls		Price validation controls		
		Minimum quantity / notional value	**Minimum quantity for outside BBO**	**BBO spread, +/-** ***(if available)***	**Last trade price, +/-** ***(if available)***	**Reference price, +/-**
IDEM Equity	FTSE MIB index futures	*Defined via Borsa Italiana's Notice and included in the "Guide to the Parameters"*	*Defined via Borsa Italiana's Notice and included in the "Guide to the Parameters"*	1%	1%	1%
	FTSE MIB index miniFutures			1%	1%	1%
	FTSE MIB Dividend index futures			2%	2%	2%
	Stock futures on Italian and Pan-European underlyings			10%	10%	10%
	Single stock dividend futures			-	-	-
	FTSE MIB index options (including weekly)			20%	20%	20%
	Stock options (including weekly)			10%	10%	10%
IDEX	IDEX monthly futures			-	-	-
	IDEX quarterly futures					
	IDEX yearly futures					
AGREX	DURUM Wheat futures			-	-	-

c. Info dissemination and impact on market statistics

Negotiated Transactions (independently by their trade size) are directly disseminated at trade execution. A proper field in the executed trade message indicates that the trade has been executed as a Negotiated Transaction.

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

5.3 Strategy order management

a. 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 two 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.

b. 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.

c. 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 (please refer to the Borsa Italiana's Rules and related Instructions).

d. Strategy Quote Definition

A strategy is viewed as a single instrument in SOLA, and strategies are quoted with bid and 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.

e. Order Types

Order Types for Strategies are the same available for Standard Series, except for Stop Orders which are not available.

f. Trades Execution

According to the Borsa Italiana's Rules and related Instructions, 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.

g. Implied Orders Management

g.1) 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

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).

g.2) 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
Implied prices*:*	*[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 at 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.

g.3) 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
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.

h. 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 (please refer to the Borsa Italiana's Rules and related Instructions).

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.

i. Order Priority

i.1) 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).

i.2) 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:	❶104.55 – 104.58❷
December-September Spread:	❸0.05 – 0.09❹
September Implied limits:	*[104.46] – [104.53]*
June book:	❺104.39 – 104.42❻
September-June Spread:	❼0.07 – 0.11❽
September Implied limits:	*[104.46] – [104.53]*

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

The implied bids on the September book are generated by:

Implied Bid from (Bid of December ❶ – Ask of December-Sept spread❹) is 104.46
Implied Bid from (Bid of Sept-June. spread ❼+ Bid of June.❺) 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 ❹ is entered into the system before the bid of Sept-June spread❼, 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 December❷ – Bid of December-Sept spread❸) is 104.53
Implied Ask from (Ask of Sept-June. spread❽ + Ask of June.❻) 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 ❸ was entered into the system before the sell order of Sept-June spread❽, 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 that 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[13].

To cancel an order on SAIL, the client sends an 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 will receive the KZ message confirming the cancellation.

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

[13] For FTSE MIB index futures and FTSE MIB index miniFutures, it is 15 minutes interval following the closing of the trading session (i.e. 8:45pm - 9:00pm).

Reason for Elimination	
The order price is outside the instrument limit price	NZ messages are sent to the related Clients
During the instrument opening Market Order without opposite order are eliminated	NZ messages are sent to the related Clients
Participant disconnection eliminates While Connected Order	NZ messages are sent to the related Clients
Instrument state does not allow order with disclosed quantity	NZ messages are sent to the related Clients
Cancellation of an order by the Exchange	Possible during: Order Cancellation, Trading Session, Exchange Intervention, Start of Consultation, End of Consultation, and Group Interruption NZ messages are sent to the related Clients
Instrument has expired	Carried out during Mini Batch NZ messages are sent
IOC orders partially filled or not filled	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 the following parameters of the orders already entered in the trading book through a dedicated ORDER MODIFICATION (OM) message:

- Order Price;
- Order Quantity;
- Account Type;
- Duration Type;
- Clearing Instructions;
- Position;
- Owner Data.

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

- Client Order ID;
- Client Reference ID;
- 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, the side of the order and the information reported in Appendix 1 (Algo flag, DEA flag, Client ID, etc.).

To modify an order on SAIL, the client sends an 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. 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.

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 Indication of interest to trade (IT)

In certain scenarios, the Exchange may decide to allow participants to utilize the Indication of Interest to Trade (IT) functionality. ITs 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 IT does not require that a subsequent order be sent into the market. In any case, participants are not required to respond to an IT unless they are market makers who must respond as per their overall obligations to the market.

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

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

6.4 Market Maker Monitoring - for Voluntary Market Makers and Specialists

Voluntary Market Makers and Specialist are intermediaries applying to specific schemes provided by Borsa Italiana on top of the mandatory Mifid 2 market maker agreements and market maker schemes, with predefined size, spread and time obligations.

There are two types of Market Maker Monitoring for Voluntary Market Makers and Specialists:

- Market Maker Obligation to continuously provide a number of valid quotes;
- Market Maker Obligation to respond to an Indication of Interest to Trade (IT).

Market Maker obligations are evaluated following:

- Quote update;
- Obligation Surface update;
- Indication of Interest to Trade (IT).

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, a status update is sent to the Market Maker.

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.

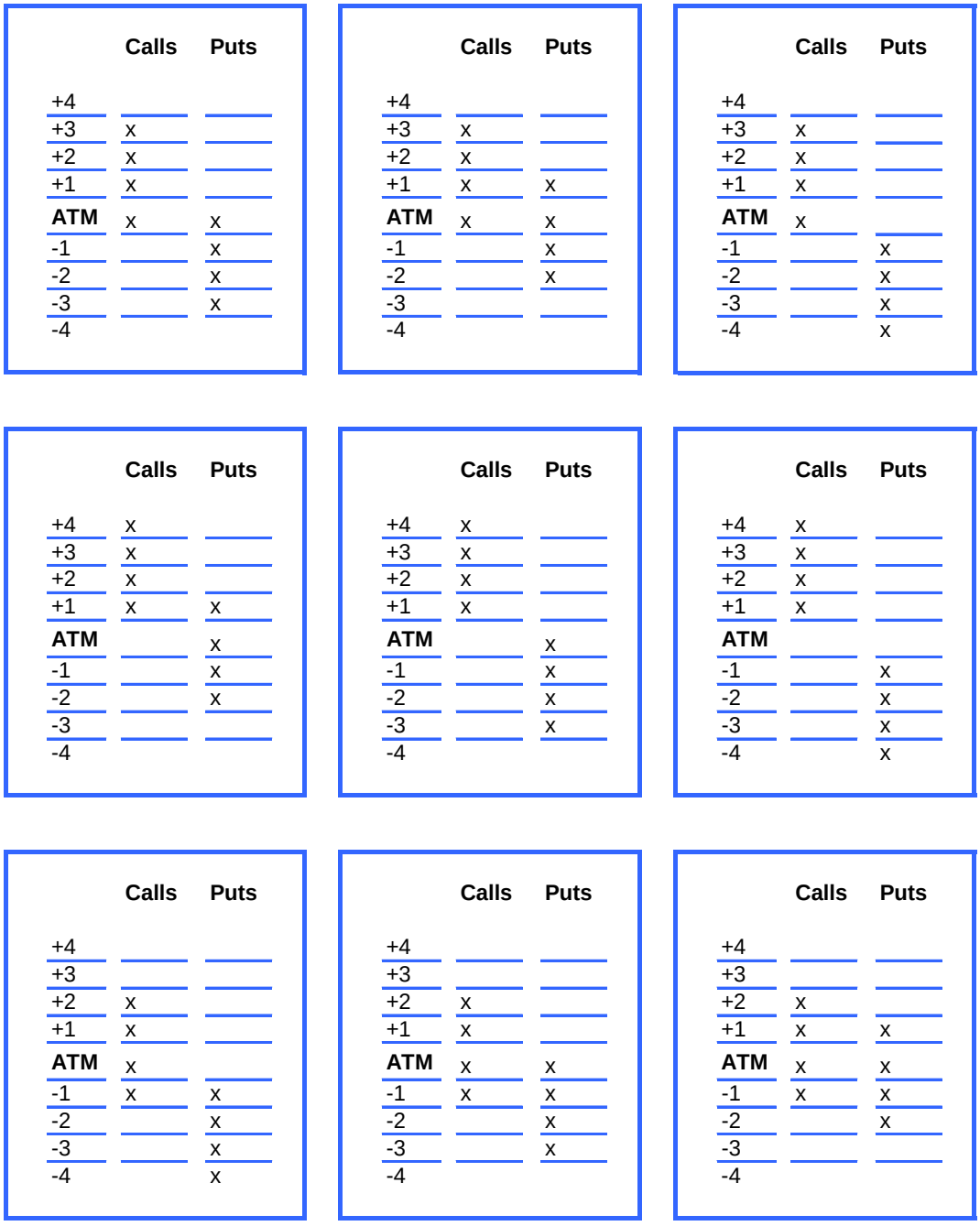
Series are updated twice a day according to the underlying price value (once at 9.00 and at 15.45) and also the market makers obligations are updated accordingly by the system.

For the example reported below, 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 pattern having no common call/put strike and one strike between the call/put surfaces.



	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		

6.5 Time interval of quoting obligations

Time interval of quoting obligations for Market Markers and Specialists is detailed in the following table:

Trading session	IDEM Equity segment FIB and miniFIB	IDEM Equity segment All other products	IDEX segment	AGREX segment
Daily session	09:15am - 05:25pm	09:15am - 05:25pm	09:30am - 05:40pm	02:30pm - 05:40pm
Evening session	05:50pm - 08:30pm	-	-	-

a. IDEM Equity

From 9.15am 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 and Specialist, the underlying on which the derivatives are based determines:

- The minimum number of lots to quote;
- Maximum allowed bid-ask spread to fulfil, depending on the specific spread table associated to the underlying as set out in the Instructions to the Rules.

The Focus Group’s composition and the association between the underlying and the relevant spread table and quoting size are communicated via Borsa Italiana’s Notice.

7. Trading protection functions

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

- Exchange level controls;
- User-defined controls.

7.1 Exchange level controls

a. Maximum order quantity checks *(for orders and quotes)*

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

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

If an OE message is inserted with Quantity parameter higher that the limits specified, 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 the Parameters”, Maximum values for the order Quantity parameter.

b. Maximum notional value checks *(for orders and quotes)*

The maximum order notional value is reported in the “Guide to the Parameters”; the order notional value is the amount of the derivatives contract considering the quantity, the size and the price as follows:

b.1) Equity derivatives

- Index futures (including index dividend futures) = Number of contracts * Multiplier * Future price
- Index options = Number of contracts * Multiplier * Strike price

- Stock futures (including stock dividend futures) = Number of contracts * Multiplier[14] * Future price
- Stock options = Number of contracts * Multiplier * Strike price

b.2) Commodity derivatives

- IDEX futures = Number of contracts *Multiplier (different for each expiry) * Future price
- AGREX futures = Number of contracts * Multiplier * Future price.

c. 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", please refer to the Borsa Italiana's Rules and related Instructions);
- if the "Y" or "Z" validations are not fulfilled during the Continuous Trading Phase, the Instrument Series State is set to Suspended for a pre-configured time interval, currently set to 1 minute (please refer to the Borsa Italiana's Rules and related Instructions). At the end of such period, Borsa Italiana has the power to activate a Volatility Auction, so setting the Instrument Series State to Reserved.

Pursuant to the Borsa Italiana's Rules and related Instructions, the Trading Parameters, the Control Prices and the 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 OE message against the following prices, defined at Instrument Series level (according to the Borsa Italiana's Rules and related Instructions):

- 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 the Borsa Italiana's Rules and related Instructions):

- 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 the Parameters"[15].

Orders to execute Negotiation Transactions are subject to X validation only.

Borsa Italiana, as detailed in the Borsa Italiana's Rules and related Instructions, 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.

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 the event of prices bandwidths modification (due to X parameter change or Control Price change) during the Continuous trading phase, the outstanding orders are not cancelled. In such case, if a Limit order that is resting on the

[14] For stock option and futures contracts, the multiplier (lot size) depends on the underlying, defined via Borsa Italiana's Notice.
[15] Values of the parameters may differ: i) by product; ii) for specific sub-periods of the trading day (e.g. for FTSE MIB index futures and FTSE MIB index miniFutures, starting from 5.50pm until 8.30pm).

order book fails the “X”, “Y” or “Z” validation, the order is cancelled and the IDEM Trading System returns an NZ message with the Order Status equal to “Eliminated”.

c.1) 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.

At the Intervention Before Opening phase the orders outside the prices bandwidths (X validation) are automatically cancelled and an ORDER CANCELLATION NOTICE (NZ) message is disseminated.

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 ERROR NOTICE MESSAGE (ER) providing the reason code “Order price is outside instrument thresholds”.

In the event of prices bandwidths modification (due to X parameter change or Control Price change) during the Continuous trading phase, the outstanding orders are not cancelled.

c.2) Trade Price vs. Static Control Price (“Y Validation”)

Prior to effectively executing a trade, the IDEM Trading System validates its potential execution price. In particular, 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, a 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 behaviour after a period of time defined by Borsa Italiana (see “Circuit Breakers”).

The Static Control Prices used for X and Y price validations during the Extended Hours are automatically updated at the beginning of the Extended Hours period, as defined in Borsa Italiana Rules and Instructions. Borsa Italiana can modify the values of the Static Control Prices and the price limits on the basis of specific market conditions.

c.3) Trade Price vs. Last Trade Price (“Z Validation”)

Prior to effectively executing a trade, the IDEM Trading System validates its potential execution price. In particular, 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, a KE message is returned with Order Status equal to “Eliminated”;
- the Instrument Series State is changed to “Suspended”;
- an NI message is broadcast with the new Instrument Series State

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

c.4) 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, it is described the case of an incoming order rejected due to the triggering of the Circuit Breaker.

Pre-conditions on the instrument FIB8C:

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

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 FIB8C @ 20625

Result:

- 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”;
- The trade at 20615 does not occur;
- Instrument FIB8C is Moved to Circuit Breaker status for 1 minute. The instrument state is dispatched by HSVF via H<i> message.

FIB8C 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

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

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

Pre-conditions on the instrument FIB8C:

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

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 FIB8C @ 20625

Result:

- The following trades are executed:
    a. 3 @ 20510
    b. 3 @ 20570
- 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 FIB8C is rejected. Customer is notified with an Order Acknowledgment: “Removed by Circuit Breaker”;
- The instrument FIB8C is moved to Circuit Breaker status for 1 minute and HSVF dispatches the State of the series via H<i> message.

FIB8C 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

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

In the following example, it is described the case of an incoming order partially rejected on the first FTSE MIB index futures expiry due to the triggering of the Circuit Breaker on the second FTSE MIB index futures expiry (i.e. interaction with Time Spread Strategy).

Pre-conditions on FIB8C, FIB8F, FIB8FT:

FIB8C							
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

FIB8C							
3				20925	1	1	3
4							4

FIB8F							
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

FIB8FT (Buy FIB8F, Sell FIB8C)							
Level	**# of Orders**	**BidQty**	**Bid**	**Ask**	**AskQty**	**# of Orders**	**Level**
1	1	10	-150				1
2							2
3							3
4							4

Last Price FIB8C: 20910

Last Price FIB8F: 20570

Circuit Breaker Parameters (FIB8C, FIB8F):

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

Customer enters the following order: buy 3 FIB8C @ 20920

Result:

- The following trade is executed:
    a. 2 FIB8C @ 20915
- Since a strategy order has to execute both legs at the same time, please note that the matching between the outstanding incoming order (buy 1 FIB8C @ 20920) and the implied order (sell 5 FIB8C @ 20920) would violate Z% parameter on the instrument FIB8F: the price deviation between the offer price of the instrument FIB8F (20770) and the last price of FIB8F exceeds 0.5%.

    The result is therefore the following:

    a. The instrument FIB8F is moved to Circuit Breaker status for 1 minute (notification is sent to the market)
    b. The outstanding incoming order on FIB8C (buy 1 @ 20920) is rejected (notification is sent to the Customer)
    c. The implied orders on FIB8C and FIB8F are removed during the Circuit Breaker phase
- HSVF dispatches the State of the series FIB8F via H<i> message

FIB8C							
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

FIB8F during Circuit Breaker							
Level	**# of Orders**	**BidQty**	**Bid**	**Ask**	**AskQty**	**# of Orders**	**Level**
1				20770	5		1
2							2
3							3
4							4

FIB8FT (Buy FIB8F, Sell FIB8C)							
Level	**# of Orders**	**BidQty**	**Bid**	**Ask**	**AskQty**	**# of Orders**	**Level**
1	1	10	-150				1
2							2
3							3
4							4

c.5) Other relevant situations for Dynamic price deviation controls

- Negotiation Transactions: prices of Negotiation Transactions 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.

c.6) 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

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: Maximum values for the order Quantity parameter.

On the opposite, maximum order notional value controls are not applicable to Strategies.

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.

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 a 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 fails to pass the Y or Z validations.

If a Circuit Breaker is triggered, the incoming Strategy Order is rejected and a 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.

7.2 User-defined controls

a. Automatic cancellation of orders and quotes in case of disconnection

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

The IDEM Trading Systems makes available a specific field in the LOGIN MESSAGE (TC) ("disconnection instruction") to activate, for each TraderID 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 Trading System.

b. Global Cancellation (*for orders / quotes / both*)

The Global Cancellation (GC) message allows a Member Firm removing, with a unique transaction: i) all resting orders in the orderbook, or ii) all resting quotes placed with the BULK QUOTE (Qi) message related to a specific TraderID and on all Instrument Series in the same Instrument Group[16], or iii) both.

The Global Cancellation message is available on both BQ and PQ users and is acknowledged by the GLOBAL CANCELLATION CONFIRMATION (KG) message.

[16] In order to identify the Quotes to be cancelled via the GC, the TraderID and the Instrument Group ID must be specified.

If GC triggering involves all resting quotes, there is no Quotes Cancellation Notice returned to the Member Firm, as per current behaviour. Moreover, when an unsolicited cancellation is performed by the Exchange, the participant receives a NOTICE OF CANCELLATION OF ALL QUOTES (NP) message to confirm that resting quotes have been removed.

If GC triggering involves all resting orders, an Order Cancellation Notice (NZ) is returned to the Member Firm with Order Status equal to “Eliminated”.

c. Kill Switch functionality

The Kill Switch (KS) functionality allows a Member Firm to i) prevent entering or modifying any order or quote in the IDEM trading system, and ii) remove all resting orders (including orders to execute Negotiated Transactions) and quotes at the same time, by sending the Risk Master Switch (RT) message.

The Risk Master Switch message is available on RM user only and, subject to RM user configuration, KS functionality may allow to disable a TraderID or a predefined Group of TraderIDs.

Following KS triggering, i) Marker Makers will keep receiving real-time alarms related to the quoting obligations, if applicable, and ii) the affected TraderIDs can be re-activated by Borsa Italiana upon request of the Member Firm.

Member Firms are requested to pay the necessary attention when triggering KS and GC messages, in order to avoid situations likely to hinder orderly trading (for example, activating the aforementioned functionalities close to the end of the auction phases).

d. Market Maker Quoting Protection (MMQP)

Market Maker Quoting Protection (MMQP) provided by SOLA is designed to protect Market Makers 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 MMQP if its value is equal to or greater than the parameter provided by the Market Maker. 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.

d.1) Protection Counters

The following lists all the protection counters available. These counters can be set by the Market Maker using the Bulk Quote Data (BD) message; otherwise the default market values will be on place.

Functionally, protection counters are provided for each class where the TraderID is assigned as Market Maker.

Trade Counter (not currently active on IDEM market)

This counter is incremented by one every time the Market Maker executes a trade of at least N lots on any instrument of the given class. Once the counter has reached a defined threshold the Market Maker Protection is triggered.

Formula: *Maximum Trade = ∑ Trade Occurrence (Trade Volume > Minimum Volume)*

Volume Counter

This counter is incremented by the trade volume every time a Market Maker 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**:** *Maximum Volume = ∑ Volume*

Value Counter (disabled for IDEM market)

This counter is incremented by the trade value every time the Market Maker executes a trade on any instrument of a given class.

Formula: *Maximum Value = ∑ (Trade Volume x Price x Contract Size x Tick Value)*

Delta Volume Counter

This counter is incremented or decremented by the trade volume every time the Market Maker 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:

Option Delta Volume = Absolute ∑ ((Buy Call Volume + Sell Put Volume) – (Sell Call Volume + Buy Put Volume))

Future Delta Volume = Absolute ∑ (Buy Volume – Sell Volume)

Delta Value Counter (disabled for IDEM market)

This counter is incremented or decremented by the trade value every time the Market Maker 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*:**

Option Delta Value = Absolute ∑ (Buy Call or Sell Put Volume x Price x Contract Size x Tick Value) - (Sell Call or Buy Put Volume x Price x Contract Size x Tick Value)

Future Delta Value = Absolute ∑ (Buy Volume x Price x Contract Size x Tick Value) - (Sell Volume x Price x Contract Size x Tick Value)

d.2) Counter Reset

Time Interval

The time interval represents the maximum number of seconds between a trade and its previous trade.

If a time interval is provided by the Market Maker, then the following counters are reset if the interval of time between two trades is greater than the time interval provided:

- Maximum Volume
- Delta Volume
- Maximum Value
- Delta Value.

Disable Market Maker Protection

If a Market Maker sets the Protection Number of Trades or the Protection Trade Quantity to zero then the Trade Counter protection is disabled.

All other counters can be deactivated in a bulk by sending a Time Interval parameter to zero or individually with by specifying a valid Time Interval and setting the specific counter to zero:

- Maximum Volume
- Delta Volume
- Maximum Value
- Delta Value.

Parameter Update

Following the reception of new BD with parameter updates from the Market Maker, then all MMQP counters are reset.

Quote Update

Trade Counter is always reset to zero upon quote reception.

d.3) Triggering MMQP

MMQP is triggered once counters are exceeded. Once triggered, the Exchange automatically cancels all quotes posted by the TraderID 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 MMQP is triggered, the participant receives a NOTICE OF CANCELLATION OF ALL QUOTES (NP) message to confirm that the quotes currently live have been removed.

If the MMQP is triggered, then all MMQP counters are reset.

d.4) Standard MMQP

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

d.5) Advanced MMQP

Combined with the Standard MMQP, the Advanced MMQP 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 ACKNOLEGMENT (KO) or rejected with an ERROR MESSAGE (ER).

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

e. Self-Execution Prevention (SEP)

SOLA provides Self-Execution Prevention (“SEP”), with the purpose for market participants to avoid execution when an order crosses an opposite-side order sent by the same Member Firm on the order book (i.e. “self-matching”).

SEP on SOLA is user-configurable, allowing for each Member Firm to specify which TraderIDs of its member firm will or will not be able to interact, and determine which order (incoming or resting) takes precedence.

SEP applies during continuous trading for Limit, Market, Top, Stop (loss) and If-Touched orders.

e.1) Basic functionality

Market participants can define one or more Self-Execution Prevention Groups (“SEP Group”) for their TraderIDs. Members can set up their SEP Groups by requesting the configuration to the Exchange:

- A SEP Group will contain one or more TraderIDs from a particular member firm. A SEP Group cannot include TraderIDs from multiple member firms. A TraderID will be allowed to be associated only to one SEP Group.
  - orders submitted from TraderIDs within the same SEP Group will not be allowed to interact with each other;
  - orders submitted from TraderIDs in different SEP Group will be allowed to interact with each other.
- SEP will take effect upon aggression of the order (before execution) and not on order entry or replenishment.

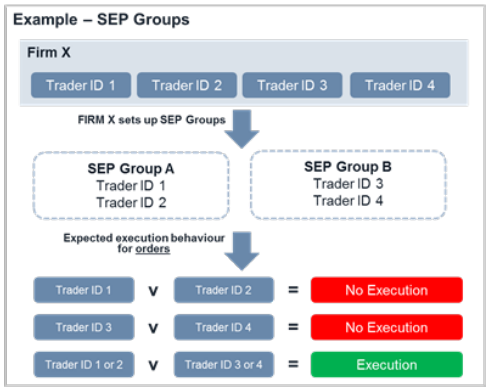
The diagram above explains how the interaction between TraderIDs / SEP Groups works on SOLA.

“SEP Rules” regulate the interaction of orders from a member firm and are defined at the TraderID level. Different rules can be applied to TraderIDs included in the same SEP Group. The SEP rule of the incoming order (i.e. the aggressive order) will regulate the interaction between two orders which are part of the same SEP Group.

The following SEP Rules will be available for each TraderID:

- Cancel Incoming Order (CIO): leaves the resting order while expiring the incoming order;
- Cancel Resting Order (CRO): expires the resting order while allowing the incoming order to aggress (and rest in the book if it is not matched);
- Cancel Both Orders (CBO): expires both the resting order and the aggressing order;
- Reduce and Cancel (RC): cancels both orders if they are of the same size. For those not of the same size, the smallest order will be cancelled and the larger order will be reduced by the size of the smaller order before

executing/resting. Both orders will also be cancelled if the resting order is marked with any Self Execution Prevention (other than RC) and the incoming order is smaller than the resting order.



e.2) Exceptions to SEP Rules

- If a self-execution is identified involving a quote (as a resting or aggressive order), the SEP Rule attached to the incoming TraderID will be ignored and the following rules will apply:
  - in case the opposite side is an order (i.e. it is not a quote), the quote will survive while the order (incoming or resting) will be cancelled;
  - in case the opposite side is a quote (e.g. two quotes submitted by two different TraderIDs of the same market participant), no SEP rules will be applied i.e. the trade will be executed.
- Strategies: SEP will only apply for orders with potential executions in the "Strategy v Strategy" scenario, i.e. if a strategy instrument could execute against another (resting) strategy instrument, SEP will prevent this execution. SEP will not apply in the Strategy v Legs case, i.e. when a strategy instrument could execute against orders on the Order book, the trade will be executed;
- Minimum quantity orders: SEP will not apply to execute minimum quantity orders, including icebergs, Fill or Kill (FOK) and Fill and Kill (FAK) orders;
- "Internal" cross orders: SEP will not apply to cross orders with the same counterparty on both sides.
- in the particular case of market and TOP orders triggering SEP without any previous trade, the incoming market order will not enter into the order book.

f. Pre-Trade Validation (PTV) functionality

The Pre-Trade Validation (PTV) functionality provides a tool to manage the level of risk connected with the trading activity submitted to SOLA via a pre-defined group of TraderIDs, by performing user-defined, real-time checks before allowing each order and quote to enter the SOLA trading system.

This functionality can be used, for example, by:

- IDEM Members to monitor the risk associated to their own trading activity;
- IDEM Members offering Direct Market Access (DMA) to control the risk related to the trading activity of their DMA clients;
- General Clearing Members (GCMs), delegated by their NCMs which are IDEM Members, to manage the cleared risk exposure generated by the trading activity of their NCMs.

The PTV functionality is available for all products listed on IDEM via SOLA native APIs (SAIL).

For the purpose of the use of the PTV functionality two roles are defined:

- the “Risk Manager”, identifying either the IDEM Member or its GCM (in case of delegated use), which controls the level of risk determined respectively by the order flow of its own activity / its DMA clients’ activity or its NCM (as the case may be) trading products listed on IDEM;
- the “Managed Entity”, identifying either an entire Member Firm (defined by its Member ID) or a single TraderID / group of TraderIDs of the same Member Firm, which are subject to a common set of PTV controls as defined by the Risk Manager. The Managed Entity could be subject to PTV controls by more than one Risk Manager; in this case, the more stringent limits will apply.

The PTV can be configured by the Risk Manager (for one of the purposes described above) to constrain the trading activity of its controlled Managed Entity(ies) at different levels, in particular:

- Firm / Group of TraderIDs / Instrument Group / Instrument;
- Firm / Group of TraderIDs / Instrument Group;
- Firm / Instrument Group / Instrument;
- Firm / Instrument Group.

The following limits can be configured by the Risk Manager:

- **Max Order Quantity limit** for orders and quotes;
- **Max Order Quantity limit** for order to execute Negotiated Transactions;
- **Max Notional Value limit,** for orders and quotes;
- **Max Notional Value limit,** for orders execute Negotiated Transactions;
- **Price Collar limit**, allowing to automatically reject orders and quotes not meeting a set of price interval parameters defined at Instrument series level, in addition to Exchange-based dynamic price deviation controls; in particular, for each Instrument series, the Risk Manager will be able to define a reference price and a maximum upward/downward divergence by this (expressed in percentage points);
- **Position limit** on executed trades (net long/short position) during the day, expressed in quantity terms:
  - the trade triggering the limit’s breach is executed;
  - the breach of the net long threshold triggers the cancellation of all buy orders and all quotes (and viceversa for the net short threshold);
- **Exposure limit** on open orders (excluding quotes) plus executed trades (net long/short position) during the day, expressed in quantity terms:
  - the incoming order that would breach the net long threshold triggers cancellation of all buy orders and all quotes (and viceversa for the net short threshold);
- **Access to the “Market Maker Quoting Protection” (MMQP)**, allowing the Risk Manager to specifically control the Managed Entity’s quoting activity based on bulk quotes. Since the MMQP is available to both Market Makers and their Risk Managers, in case two sets of limits are applied to the same Managed Entity, the most restrictive configurations will apply.

Based on configurations defined by the Risk Manager, SOLA will perform real-time checks before allowing each order and quote to enter the SOLA trading system.

Risk Manager can update configured limits in real-time with immediate effectiveness.

SOLA will disseminate to both Risk Manager and related Managed Entity(ies) all the messages related to the “usage” of the predefined Position and Exposure limits (“Risk Limits Usage Notice”):

- anytime a defined limit approaches the threshold, an alert is disseminated according to a 10% interval;
- alerts are disseminated when the available threshold “used” is at 50%, 60%, 70% etc. of its total.

These messages are available for SAIL protocol, while FIX protocol only disseminates error codes.

It is responsibility of the Risk Manager to set up and manage the Pre-Trade Validation controls for each Managed Entity, and to inform the Managed Entity of the controls that have been applied to its trading activity. Independently of the activation of the PTV functionality, according to the Borsa Italiana’s Rules and related Instructions, IDEM Members are

required to establish, maintain and enforce adequate systems and controls to prevent anomalous orders in terms of price, quantity and frequency.

For further details on the PTV functionality, please refer to the “IDEM Guide to Pre-Trade Validation (PTV) functionality” available on Borsa Italiana’s website.

8. 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.

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 Amendment or cancellation of a trade by the Exchange

If required, the Exchange can amend or cancel a trade that took place during the day, as detailed in the Borsa Italiana’s Rules and related Instructions. The amendment/cancellation of a trade can take place during:

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

In case of trade amendment, SOLA disseminates to the two Member Firms:

- a TRADE CANCELLATION (NX) message with the trade number of the cancelled trade, and
- a new TRADE (NT) message with the PTT Flag set to ‘A’ (amended).

In case of a trade cancellation, SOLA disseminates to the two Member Firms:

- a TRADE CANCELLATION NOTICE (NX) message.

Appendix 1: Specifying regulatory information in order entry messages

a) Algo Trading flag and DEA flag

Market participants are required to report to the trading venue, for each order entered in the trading system, whether the order is being inserted: i) using an algorithm; ii) using Direct Electronic Access (DEA), as defined in Article 4(1) of Directive (EU) 2014/65.

The following two fields are available in SOLA trading protocols in order to provide this regulatory information.

Field name	Format	SAIL possible values	Notes / Error codes	FIX relevant Tag(s)
Algo flag	1 alphanumeric code. Can be 'blank', 'null' or 'empty' (interpreted as 'False')	The following values can be used: - 'Y': Yes - 'N': No	No error codes based on the value of this field	2594 (OrderAttributeType); 2595 (OrderAttributeValue)
DEA flag	1 alphanumeric code. Can be 'blank', 'null' or 'empty' (interpreted as 'False')	The following values can be used: - 'Y': Yes - 'N': No	No error codes based on the value of this field	

b) Identifiers and Qualifiers

Market participants are required to report to the trading venue, for each order entered in the trading system, information regarding the identity of: i) the client on whose behalf the order is being submitted to the trading venue; ii) the person or algorithm within the member firm that is responsible for the investment decision in relation to the order; iii) the person or algorithm within the member firm that is responsible for the execution of the order (e.g. order entry in the trading system).

This information must be indicated in SOLA messages in the format of "Identifiers" (as 'Short Codes'[17]) and "Qualifiers" (specifying the 'nature' of the Identifier i.e. the identifier represents a legal entity, a natural person or an algorithm). For full information regarding the format of these fields in the SOLA protocols, please refer to the Technical Documentations.

Please note that:

- only 10 digits numeric values between 4 and 4,294,967,295 will be accepted as a Short Code;
- in case the user enters 'Blank' / 'Null' / Empty' or '0' value for an Identifier, but he specifies a Qualifier at the same time, the order will be rejected with the error message "Client Identification Code not supported";
- in case a Short Code is specified for an Identifier, the corresponding Qualifier must be populated with one of the available options ('L', 'P' or 'A', where available). Otherwise, the order will be rejected.

Field Name	Format	SAIL possible values	Notes / Error codes	FIX relevant Tag(s)
Client ID Code	10 numerical code. Can be 'Blank', 'Null' or 'Empty' (interpreted as '0': NONE).	The following values can be used: - Blank / Null / Empty - '0': NONE - '1': PNAL (reserved value) - '2': AGGR (reserved value) - Short Code	Whenever the user specifies the reserved value '3': CLIENT, the order will be rejected with error code "Client Identification Code not supported"	452 (PartyRole); 448 (PartyID)

[17] Members are required to provide the full format of the Identifier, requested by Mifid 2 (e.g. fiscal code for Italian persons; Legal Entity Identifier for legal entities etc.), for each 'Short Code', outside of the trading system and by the end of the trading day. See related technical documentations for more information.

Field Name	Format	SAIL possible values	Notes / Error codes	FIX relevant Tag(s)
Client ID Code Qualifier	1 alphanumerical code. Can be 'Blank', 'Null' or 'Empty' (interpreted as '0': NONE)	Possible values are: - Blank / Null / Empty - '0': NONE - 'L': Legal Entity Identifier - 'P': Natural Person	Any other value different from "Blank / Null / Empty", '0', 'L' or 'P' will cause the rejection of the order with the error code "Syntax Error: Client ID Qualifier"	2376 (PartyRoleQualifier)
		If the Client ID Code is:		
		- '0': 'NONE' (or interpreted as '0'): the Client ID Qualifier must be '0': NONE (or interpreted as '0'). Otherwise, the order will be rejected	Error code "Syntax Error: Client ID Qualifier not supported".	
		- a Short Code: the Client ID Qualifier must be valued as 'L' or 'P'. Otherwise, the order will be rejected	Error code: "Syntax Error: Client Identification Qualifier not supported"	
Investment Decision ID	10 numerical code. Can be 'Blank', 'Null' or 'Empty' (interpreted as '0': NONE)	The following values can be used: - Blank / Null / Empty - '0': NONE (reserved value) - Short Code	Whenever the user specifies one of the reserved values '1': PNAL, '2': AGGR or '3': CLIENT, the order will be rejected with error code "Syntax Error: Investment Decision ID Code not supported"	452 (PartyRole); 448 (PartyID)
Investment Decision ID Qualifier	1 alphanumerical code. Can be 'Blank', 'Null' or 'Empty' (interpreted as '0': NONE)	The following values can be used: - Blank / Null / Empty - '0': NONE - 'A': Algorithm - 'P': Natural Person	Any other value different from "Blank / Null / Empty", '0', 'A' or 'P', will cause the rejection of the order with the error code "Syntax Error: Investment Decision ID Qualifier"	2376 (PartyRoleQualifier)
		If the Investment Decision ID Code is:		
		- '0': 'NONE' (or interpreted as '0'): the Investment Decision ID Qualifier must be '0': NONE (or interpreted as '0'). Otherwise, the order will be rejected	Error code "Syntax Error: Investment Decision ID Qualifier not supported"	
		- a Short Code: Investment Decision ID Qualifier must be valued as 'A' or 'P'. Otherwise, the order will be rejected	Error code: "Syntax Error: Investment Decision ID Qualifier not supported"	
Execution Decision ID	10 numerical code. Cannot be 'Blank', 'Null' or 'Empty'	The following values can be used: - '3': CLIENT (reserved value) - Short Code	Whenever the user leaves the field 'blank', 'null' or 'empty', the order will be rejected with error code "Syntax Error: Execution Decision ID Code cannot be blank". Whenever the user specifies reserved values '0': NONE, '1': PNAL or	452 (PartyRole); 448 (PartyID)

Field Name	Format	SAIL possible values	Notes / Error codes	FIX relevant Tag(s)
			'2': AGGR, the order will be rejected with error code “Syntax Error: Execution Decision ID Code not supported”	
Execution Decision ID Qualifier	1 alphanumerical code. Can be ‘Blank’, ‘Null’ or ‘Empty' (interpreted as ‘0’: NONE).	The following values can be used: - ‘Blank’ / ‘Null’ / ‘Empty’ - '0': NONE - 'A': Algorithm - 'P': Natural Person	Any other value different from “Blank / Null / Empty”, ‘0’, ‘A’ or ‘P’, will cause the rejection of the order with the error code “Syntax Error: Execution Decision ID Qualifier”	2376 (PartyRoleQualifier)
		If the Execution Decision ID Code is:		
		- ‘3’: ‘CLIENT’ (or interpreted as ‘0’): the Execution Decision ID Qualifier must be ‘0’: NONE (or interpreted as ‘0’). Otherwise, the order will be rejected	Error code “Syntax Error: Execution Decision ID Qualifier not supported”	
		- a Short Code: Execution Decision ID Qualifier must be valued as ‘A’ or ‘P’. Otherwise, the order will be rejected	Error code “Syntax Error: Execution Decision ID Qualifier not supported”	

A summary of inconsistent combinations of Identifiers and Qualifiers, leading to order entry rejection, is reported in the following tables.

Table 1: Client ID Code and Client ID Code Qualifier

		Client ID Code Qualifier				
		Blank Null Empty	**0**	**A**	**L**	**P**
Client ID Code	**Blank / Null / Empty**	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	0	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	1	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	2	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	3	Rejected	Rejected	Rejected	Rejected	Rejected
	Short Code	Rejected	Rejected	Rejected	**Accepted**	**Accepted**

Table 2: Investment Decision ID and Investment Decision ID Qualifier

		Investment Decision ID Qualifier				
		Blank Null Empty	**0**	**A**	**L**	**P**
Investment Decision ID	**Blank / Null / Empty**	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	0	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	1	Rejected	Rejected	Rejected	Rejected	Rejected
	2	Rejected	Rejected	Rejected	Rejected	Rejected
	3	Rejected	Rejected	Rejected	Rejected	Rejected
	Short Code	Rejected	Rejected	**Accepted**	Rejected	**Accepted**

Table 3: Execution Decision ID and Execution Decision ID Qualifier

		Execution Decision ID Qualifier				
		Blank Null Empty	**0**	**A**	**L**	**P**
Execution Decision ID	**Blank / Null / Empty**	Rejected	Rejected	Rejected	Rejected	Rejected
	0	Rejected	Rejected	Rejected	Rejected	Rejected
	1	Rejected	Rejected	Rejected	Rejected	Rejected
	2	Rejected	Rejected	Rejected	Rejected	Rejected
	3	**Accepted**	**Accepted**	Rejected	Rejected	Rejected
	Short Code	Rejected	Rejected	**Accepted**	Rejected	**Accepted**

Appendix 2: Trading venue, instrument, order and trade identifiers

Reference Data, Acknowledgments and Execution Notice messages distributed by SOLA protocols provide participants with identifiers of instruments, orders and trades that participants can use in order to fulfil their regulatory obligations (e.g. record keeping, transaction reporting).

A synthetic description of the available identifiers is reported below. For a full description of the structure and format of these fields and related messages, please refer to the Technical Documentations.

Table 1: Trading Venue identifier

Field Name	Format	Description	Comments	FIX protocol
Exchange ID	1 alphanumeric code	Unique identifier of the trading venue where the instrument is traded. 'I': IDEM (MIC: XDMI)	Available in HSVF Trade and Reference Data ("Instrument Keys") messages	Not available. Please note that the first letter of the SICO[18] code can be used for deriving Exchange ID
MIC Code	4 alphanumeric code	Segment MIC code of the trading venue where the instrument is traded. 'XDMI': IDEM	Available in HSVF Post Trade messages	Not available

Table 2: Instrument identifiers

Field Name	Format	Description	Comments	FIX protocol
Group[19]	2 alphanumeric code	Unique identifier of the Group to which the individual financial instrument belongs in the reading systems.	Available in all Acknowledgment, Execution Notice and HSVF Reference Data ("Instrument Keys") messages	17 (Order Acknowledgment message)
Instrument[14]	4 alphanumeric code	Unique identifier of the individual financial instrument in the trading systems. Unique per Group.	Available in all Acknowledgment, Execution Notice and HSVF Reference Data ("Instrument Keys") messages	17 (Order Acknowledgment message)
ISIN	12 alphanumeric code	ISIN code of the individual financial instrument.	Available in HSVF Reference Data ("Instrument Keys") messages. Chaining of: - 'Instrument' - 'Group' is uniquely associated to an ISIN code	Not available
Instrument External Code	30 alphanumeric code	Descriptive code of the instrument e.g. FIB17Z21000. See Product/Underlying code, see section "Market Overview - Standard Contracts")	Available in HSVF Reference Data ("Instrument Keys") messages. Uniquely associated to an ISIN code.	It can be retrieved from Security Definition message by concatenating the following Tags: 55, 167, 200, 205, 206, 201, 202
Symbol root	6 alphanumeric code	See Product/Underlying code, see section "Market Overview - Standard Contracts") e.g. ENI, 1ENI, 2ENI, 3ENI, 4ENI	Available in HSVF Reference Data ("Instrument Keys") messages. Futures and options have different Instrument Keys messages	55 (Security Definition message)

[18] SICO code = (Instrument ID + Group ID).

[19] As concerns messages dedicated to strategies, equivalent Group and Instrument Identifiers are available for strategy instrument ('Strategy Group' and 'Strategy Instrument ID' fields) and for each leg of the strategy ('Leg Group' and 'Leg Instrument' fields').

Field Name	Format	Description	Comments	FIX protocol
Underlying Symbol Root	10 alphanumeric code	Symbol root for the underlying security e.g. ENI	Available in HSVF Reference Data (“Instrument Keys”) messages	311 (Security Definition message)

Table 3: Trade identifiers

Field Name	Format	Description	Comments	FIX protocol
Trade number	8 alphanumeric code	Trading venue transaction identification code. Unique per financial instrument and per trading day	Available in Execution Notice messages. A unique trade identifier across all instruments of the trading venue and for the trading day can be created by chaining information in the following fields[20]: - ‘Instrument’ - ‘Group’ - ’Trade number’.	17 (Execution Report)
Strategy trade number *(NL message only, via Drop Copy only)*				527 (Execution Report)
Match Number	8 alphanumeric code	Unique ID to link all trades generated from a strategy-order match. Format GGxxxxxx - GG = Group of strategy instrument - x = numeric		Not available

Table 4: Order identifiers

Field Name	Format	Description	Comments	FIX protocol
Order ID	8 alphanumeric code	Unique per financial instrument and per trading day	Available in Order Acknowledgment messages. A unique order / quote identifier across all instruments of the trading venue and for the trading day can be created by chaining information in the following fields: - ‘Instrument’ - ‘Group’ - ’Order ID’.	Tag 37 (OrderID)
Quote ID	8 alphanumeric code	Refers to the identifier of a Bulk Quote. Unique per financial instrument and per trading day	Available in Bulk Quote Acknowledgment messages. A unique quote item identifier across all instruments of the trading venue and for the trading day can be created by chaining	Not available

[20] This chained identifier, unique across all instruments of the trading venue and for the trading day, is also disseminated as Field “Transaction Identification Code” in HSVF messages.

Field Name	Format	Description	Comments	FIX protocol
			information in the following fields[21]: - 'Instrument' - 'Group' - 'Side' - 'Quote ID'.	
Original Order ID	8 alphanumeric code	Represents the first 'Order ID' assigned to the order by the trading system	Available in Order Acknowledgment messages	Not available
Reference ID		References either the Order ID of the traded order or the Quote ID of the quote that has been traded	Available in Execution Notice messages	Tag 37 (OrderID)
Original reference ID	8 alphanumeric code	References either the Original Order ID of the traded order or the Quote ID of the quote that has been traded	Available in Execution Notice messages	Not available

In addition to timestamps and order parameters described in the "Order Entry" section, the following additional information is also reported in Acknowledgments, Execution Notice or Reference Data messages and can be used by market participants to fulfil their regulatory obligations (e.g. record keeping, transaction reporting).

For a full description of the structure and format of these fields and related messages, please refer to the Technical Documentations.

Table 5: Additional information available in Acknowledgments or Execution Notice messages

Field Name	Format	Description	Comments	FIX protocol
Trader ID	8 alphanumeric code	Identifies the Trader ID used to submit the order to the trading system: - first 4 characters: Firm Identifier - last 4 characters: Trader Identifier[22]	Available in Order Acknowledgment and Execution Notice messages. The specific Trader ID naming convention described in paragraph 'Market Makers and Specialists' can be used to identify orders / trades sent to the trading venue under a market making / liquidity provision agreement signed with the trading venue	Not available
Liquidity status *(available via SAIL and FIX Drop Copy only)*	1 alphanumeric code	Possible values are: - (blank): None - M: Maker - T: Taker	Available in Execution Notice messages. On execution, indicates whether the order was resting on the order book and providing liquidity (passive, or 'maker') or the order initiated the trade and thus took liquidity (aggressive, or 'taker')	Tag 1057 (AggressorIndicator)
Notional Amount	16 numeric	Nominal amount or notional amount traded	Total amount traded expressed in units of currency. (i.e. quantity * price * contract size)	Tag 381 (GrossTrdAmt)

[21] This chained identifier, unique across all instruments of the trading venue and for the trading day, is also disseminated as Field "Transaction Identification Code" in HSVF messages.
[22] It is available also as 'Short Trader ID' in messages where the Firm Identifier is already present.

Field Name	Format	Description	Comments	FIX protocol
Waiver indicator flag	1 alphanumeric code	Possible values are: - Null - 0: LRGS - 1: ILQD - 2: SIZE	Available in Execution Notice messages. Indicates whether the transaction was executed under a pre-trade waiver in accordance with Article 9 of Regulation (EU) 600/2014	Whenever the tag 2669 (TrdRegPublicationType) is set to '0', tag 2670 (TrdRegPublicationReason) can assume one of the following values: '4', '5',or '6'
Quantity traded	8 alphanumeric code	Traded quantity at execution of an order or quote	Available in Execution Notice messages	Tag 32 (LastShares)
Remaining quantity	8 alphanumeric code	Refers to the unexecuted quantity (including hidden quantity) after partial execution of an order or quote	Available in Execution Notice messages	Tag 151 (LeavesQty)
Displayed quantity	8 alphanumeric code	Refers to the quantity displayed in the order book after partial execution of an order or quote	Available in Execution Notice messages	Tag 210 (MaxShow)
Currency / Price currency	3 alphanumeric code	Currency in which the futures price / option strike price is expressed	Available in HSVF Reference Data ("Instrument Keys") and Post Trade messages	Not available
Price notation	1 alphanumeric code	Indicates whether the price and strike price are expressed in monetary value, percentage, yield or basis points. Possible values: - 'M': MONE (monetary) - 'P': PER (percentage) - 'Y': YIEL (yield) - 'B': BAPO (basis points)	Available in HSVF Reference Data ("Instrument Keys") and Post Trade messages	Not available

Execution Notice messages include also the information specified by the market participant at order entry and described in the Appendix 1:

- Algo flag
- DEA flag
- Client ID Code
- Client ID Code Qualifier
- Investment Decision ID
- Investment Decision ID Qualifier
- Execution Decision ID
- Execution Decision ID Qualifier.

Appendix 3: Contracts specifications

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

A.1. IDEM Equity segment

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 - 8.30pm CET
Quotation	Index points
Minimum price change (tick)	5 index points
Value of 1 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 5% of contracts traded before 5.38pm
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

IDEM: Guide to the Trading System

FTSE MIB index miniFutures

Underlying	FTSE MIB index
Trading hours	Opening auction: 8.30am - 9.00am (9.00.00 - 9.00.59) CET Continuous trading: 9.00am - 8.30pm CET
Quotation	Index points
Minimum price change (tick)	5 index points
Value of an 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	It's the same calculated for FTSE MIB index Futures
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 Dividend index futures

Underlying	FTSE MIB Dividend index
Trading hours	9.00am - 5.50pm CET
Quotation	Index points
Minimum price change (tick)	1 point
Value of 1 index point (multiplier)	€ 5
Contract size	Futures price x Multiplier
Contract months	The 5 nearest successive annual month's 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 on 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

IDEM: Guide to the Trading System

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 - 5:50pm CET
Quotation	Euro
Minimum price change (tick)	€ 0,0001
Multiplier	Depending on the underlying
Contract size	Price x multiplier
Contract months	**Stock futures on Italian underlyings**: i) 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; ii) 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 Borsa Italiana Announcement, the annual maturities (December cycle) of the 2 years subsequent the current year are also quoted. **Stock futures on Pan-European underlyings**: the 4 nearest quarterly maturities and the 2 nearest monthly maturities giving a total of 6 expirations. **Single stock dividend futures**: contracts can be traded with maturities in the months of December of the five subsequent years.
Expiry day	**Stock futures on Italian underlyings**: the third Friday of the expiry month at 9:05am CET. **Stock futures on Pan-European underlyings**: the third Friday of the expiry month at 5.50pm CET. **Single stock dividend futures:** the third Friday of the expiry month at 9:05am CET. In all cases, if the Exchange is closed that day, the contract expires on the first trading day preceding that day.
Last trading day	Expiry day
Settlement	**Stock futures on Italian underlyings**: physical or cash settled, depending on the underlying. **Stock futures on Pan-European underlyings**: cash settled. **Single stock dividend futures**: cash settled.
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	**Stock futures on Italian underlyings**: - 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. **Stock futures on Pan-European underlyings**: the first open CC&G calendar day following the expiry day. **Single stock dividend futures:** the first open CC&G calendar day following the expiry day.
Final settlement price	**Stock futures on Italian underlyings:** the opening auction price of the underlying share on the expiry day. **Stock futures on Pan-European underlyings:** the closing auction price of the underlying share on the expiry day. **Single stock dividend futures:** the value of the contract on the expiry day.
Strategies	Time spread and FLEXCO

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FTSE MIB index options

Underlying	FTSE MIB index	
Trading hours	9.00 am - 5.50 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 1 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	

IDEM: Guide to the Trading System

FTSE MIB weekly index options

Underlying	FTSE MIB index
Trading hours	9.00am - 5.50pm CET
Style	European
Quotation	Index points
Minimum price change (tick)	Equal to 1 index point
Value of 1 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 3rd Friday of each month)
Expiry day	The contract expires on the 1st, 2nd, 4th and 5th (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

IDEM: Guide to the Trading System

Stock options

Underlying	Stocks traded on Borsa Italiana's equity market	
Trading hours	9.00am - 5.50pm CET	
Style	American or European	
Quotation	Euro	
Minimum price change (tick)	€ 0.0005	
Multiplier	Depending on the underlying	
Contract size	Strike x Multiplier	
Option price (premium)	Premium x Multiplier	
Strikes generation	< 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 on 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 5:50pm 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 for American and European style Cash settled for European style only	
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	

IDEM: Guide to the Trading System

Weekly stock options

Underlying	Stocks traded on Borsa Italiana's equity market
Trading hours	9.00am - 5.50pm 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
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 3rd Friday of each month)
Expiry day	The contract expires on the 1st, 2nd, 4th and 5th (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 5:50pm 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 segment

IDEX monthly future contract - Italy Area

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
Trading hours	Continuous trading: 9.00am - 5.40pm CET	
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	
Settlement	Cash settlement. For Italy Area Contracts: 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 mean 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 - Italy Area

Underlying Commodity	**Baseload**: one Megawatt (MW) supplied during the delivery period	**Peakload**: one Megawatt (MW) supplied from 8:00 to 20:00 during the delivery period, excluding Saturdays and Sundays
Trading hours	Continuous trading: 9.00am - 5.40pm CET	
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	

IDEM: Guide to the Trading System

IDEX yearly futures contracts - Italy Area

Underlying Commodity	**Baseload**: one Megawatt (MW) supplied during the delivery period	**Peakload**: one Megawatt (MW) supplied from 8:00 to 20:00 during the delivery period, excluding Saturday and Sunday
Trading hours	Continuous trading: 9.00am - 5.40pm CET	
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	**Baseload**: 2 expirations	**Peakload**: 1 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	Location Spread	

IDEX monthly future contract - Germany / Austria Area

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
Trading hours	Continuous trading: 9.00am - 5.40pm CET	
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	
Settlement	Cash settlement. No physical delivery of the contract's underlying is envisaged	
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 mean of the hourly prices of the delivery month. Hourly and settlement prices are rounded to two decimal digits and will be rounded upward in case the third decimal digit is equal to 5	
Negotiable strategies	Location Spread	

IDEX quarterly futures contract - Germany / Austria Area

Underlying Commodity	**Baseload**: one Megawatt (MW) supplied during the delivery period	**Peakload**: one Megawatt (MW) supplied from 8:00 to 20:00 during the delivery period, excluding Saturdays and Sundays
Trading hours	Continuous trading: 9.00am - 5.40pm CET	
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	Location spread	

IDEX yearly futures contracts - Germany / Austria Area

Underlying Commodity	**Baseload**: one Megawatt (MW) supplied during the delivery period	**Peakload**: one Megawatt (MW) supplied from 8:00 to 20:00 during the delivery period, excluding Saturday and Sunday
Trading hours	Continuous trading: 9.00am - 5.40pm CET	
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	**Baseload**: 3 expirations	**Peakload**: 3 expirations
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	Location Spread	

A.3. AGREX segment

Underlying Commodity	Durum wheat
Trading hours	Continuous trading: 2.30pm - 5.40pm CET
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

Appendix 4: Certification Test Programme

The Certification Programme is based on regulatory compliance supporting interoperability against the three eligible London Stock Exchange Group (LSEG) venues. The following Certification 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 and Mifid 2 Regulatory Technical Standards) the eligible LSEG venues are 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. The eligible venues are 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 programme may constitute a breach of the eligible venue terms and conditions or rules.

a.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.

a.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.

a.3 Certification Policy

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

- Prior to use the application in the live environment (for new applications);
- 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 customer is requested to re-certify their application by the relevant venue.

If no certifications have been performed during a solar year (because any of the previous conditions occurred), the customer will be asked to self-certify (by sending an email to the relevant Trading Venue team that look after certifications) that no changes have been applied to the application since the last certification.

a.4 Test Scenario Exception Policy

Customers need to complete all the test cases referred as "mandatory" and only need to complete the test cases relating to the functionality that they will use on the Live Services of the test cases referred as "optional". 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.

a.5 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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