User Guide

BTS®: QUICK REFERENCE GUIDE

DERIVATIVES MARKETS

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BORSA ITALIANA

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Revision History

Date	Version	Description	Author
July 2012	1.0	First release	
January 2013	1.1	§ 3.4 Strategy Wizard section added	
February 2013	1.2	Cross order screenshots modified in § 3.2 Cross Order section	
January 2015	1.3	New format according to Corporate guidelines BTS re-branding (new screenshots) Minor documentation errors amended	Borsa Italiana
April 2016	1.4	BTS® registered trademark udate. New password policy description. Bundle Order and Third Party Enter shortcuts. Other minor changes.	Borsa Italiana
July 2016	1.5	Screenshot replacement due to Order Type field introduction	Borsa Italiana
November 2017	1.6	MIFID II update	Borsa Italiana
May 2018	1.7	SOLA 12 adaptions	Borsa Italiana
Janury 2019	1.8	Historical Trades window	Borsa Italiana
January 2020	1.9	SOLA 14 adaptions	Borsa Italiana
February 2021	2.0	SOLA 15 adaptions	Borsa Italiana
April 2021	2.0	Euronext rebranding	Borsa Italiana

1. INTRODUCTION

BTS® is a multi market client application that works as trading and market data front-end for equities and derivatives markets.

Both brokering and market maker functionalities are supported, as well as additional functions to help activity control, supervision and post trading activities.

Algorithmic trading capabilities are also provided to enforce sophisticated trading and quoting strategies.

Different markets are currently supported:

- Borsa Italiana Cash markets
- Borsa Italiana Derivatives markets
- ETLX

2. SCOPE AND REFERENCES

This document provides basic information to use BTS® in Derivatives market.

Further information about specific functions (quoting, authorization module for pre-trade checks, etc.) can be found in ad-hoc manuals available on the BTS® page (**http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/bts-bittradingstation/bts.en.htm**).

3. GETTING STARTED

3.1 Application Layout

When launching the **BTS**® application, a System Login window pops up where **Username**, **Password** and **Member Code** must be entered and **Environment** must be selected in order to authenticate.

Once the user has logged in, **BTS**® top-level tool bar appears with all available Menus and the virtual desks.

Also a **What's New panel** will be displayed at first user login with a new BTS version.

This box will describe all new improvements and changes of the new BTS release.

At subsequent logins, the What's New panel will be anyway available in BTS Help menu .

It is possible to have always the tool bar on top of the screen by clicking the button.

BTS® Multi Market Client main window can be functionally divided into two sections:

Menu Bar: a list of available tools divided into categories, each category can be accessed by clicking the related icon;

Virtual Desks (six by default): it is possible to have multiple virtual desktops, so that the user can avoid a crowd of windows on a single view.

The tool bar menus are (depending on the user's profile): **Session, General Settings, Market Information, Quoting, Trading, Post Trade Transparency, Pricing, Tools, Help.**

3.2 User Login and Password Management

Once the user's account has been created by the System Administrator a username and password are provided to the user. By default, a password related to a new user's account is created with a temporary validity, therefore when the user accesses BTS® Multi Market Client platform for the first time is asked to change the password. For security reasons the password expires after a given number of days; upon expiration a pop-up shall be displayed to enable the user to enter a new password.

Please note that Password must be at least 8 characters and contain at least three of the following character groups:

- Uppercase Characters (A-Z)
- Lowercase Characters (a-z)
- Numerals (0-9)
- Special characters ($, %, ^, *, .)

It is also possible for a user to autonomously modify the password by selecting 'Change Password' in the 'Session' icon drop-down:

It is not possible to re-use the last three password configured.

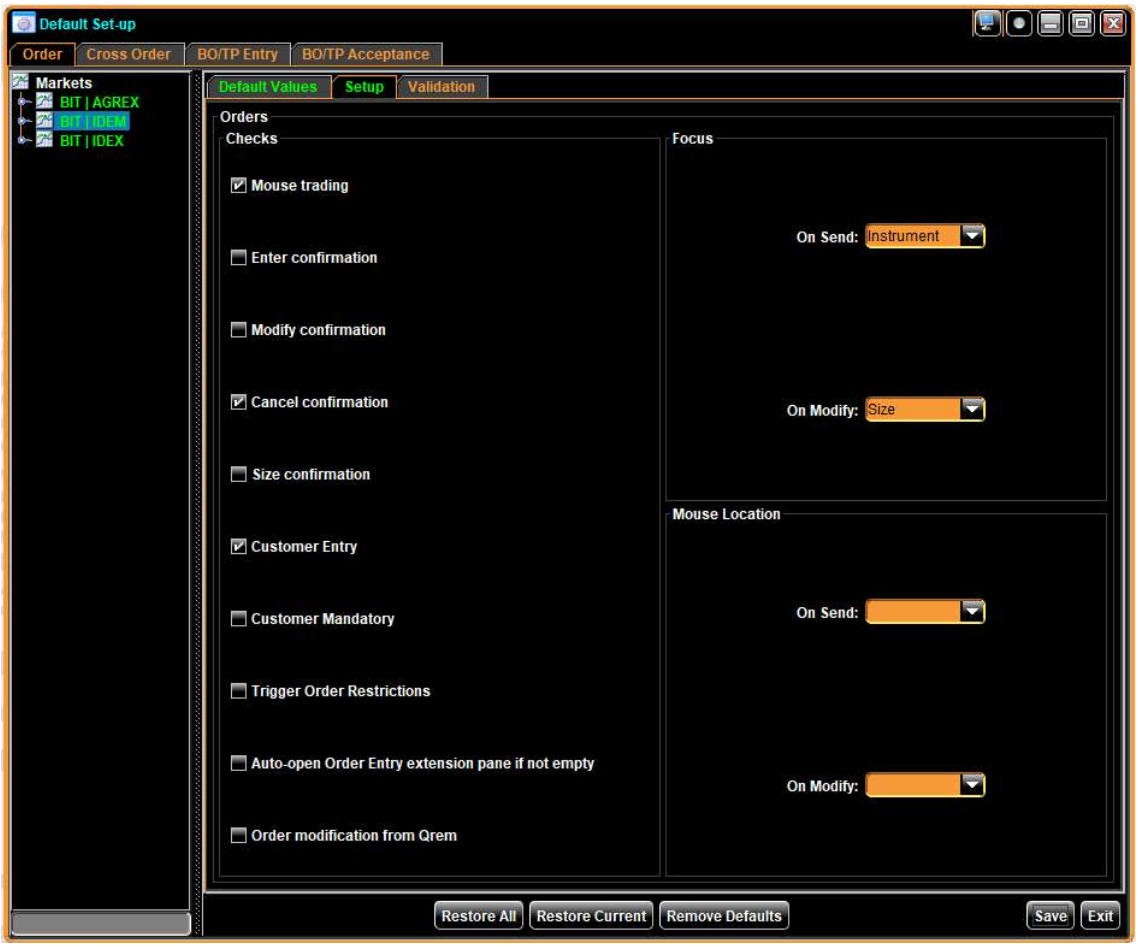
3.3 Default Set-Up

It is possible to set some trading default settings by opening the Default Set Up menu from the **General setting menu, Default Set-up** sub-menu or by CTRL+F12 shortcut. In this window all the default parameters and checks applied to the trading activity are grouped. The window is composed by three different tabs:

- Tab "**Default Values**": in this tab it is possible to set at market or instrument level the Buy/Sell Order, Cross Order, Bundle/Third Party Entry, Bundle/Third Party Acceptance default values,

  In particular for Order Panelt he light bulb icon allows to hide or show a group of fields in the Order Entry window

- Tab "**Order Set-up**": in this tab it is possible to set specific default behaviour in handling the order entry window, such as message confirmations before submitting transactions or the mouse location when a new order entry or order modification window is opened:

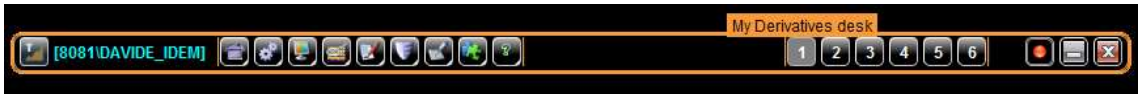


- Tab "**"Validation""**: in this tab it is possible to set additional message of confirmation in case order prices or quantity exceeds specified thresholds:

3.4 Virtual Desks

In **BTS**® the term Virtual Desk is meant as the set and lay-out of the windows working at the same time on the screen. Right Clicking on a Virtual Desk button is possible to rename it according to the user preferences.

The new name will appear only in the tool tip shown when the user moves the mouse pointer over the Virtual Desk button:



3.4.1 Saving a Desk

In the application it is possible to save up to 6 different **Virtual Desks**. In order to save the displayed **Desk** lay-out, it is needed to select from the menu **Session** on the main bar the option **Save Current Desktop Layout**. The selection of the option "**Save All Desk Layouts**" allows to save not only the currently working Desk but also all the changes and set-up applied in the other virtual Desks not currently opened. When the user logs-out from the application, in case there are unconfirmed changes on any of the virtual Desks, a pop-up message is displayed asking if the changes have to be saved or discarded.

3.4.2 Restoring the last saved Desk

It possible to restore the layout of the working Desk to the last saved thanks to the option "**Reload Desk**" included in the **Session** menu.

3.4.3 Moving a window from one virtual desk to another

It is possible to move a window from a virtual Desk to another one. This action can be carried out in two different ways:

1. From the individual window, clicking on the **Virtual Desk** icon located on the upper right side and checking the destination desk from the check list combo:

2. From the **Screen Manager** window, available in the **General Settings** menu of the main bar. The **Screen Manager** window is made up by two frames: the left-side tree shows a list of tool sets available to the user, whereas the right pane displays all the windows and the desks they are bound to. An existing window can be moved from one desk to another via the Screen Manager; after selecting a window in the right-hand pane of the window, its desk can be changed by clicking on the Desk field and selecting the new desk from the combo-box:

3.5 Application Layout Handling

Right clicking on the header of columns, an options list pops-up showing the functions available for adjusting the settings of the displayed information. The following functions are available:

- Sort Asc
- Sort Desc
- Columns
- Colors
- Font

- Format
- Highlights timeout
- Buy/Sell/prices
- Select
- Export to Excel

3.5.1 Column Sorting

Columns can be sorted clicking on the **Sort Asc/Sort Desc** options. After having sorted a column, a triangle symbol appears on the right hand of its header.

The applied sorting can be removed right clicking on the header of the sorted column and selected the item **Remove Sort** from the options list.

Sorting can be applied on multiple columns: in this case the hierarchy among the sorting criteria is given by the time priority of the setting: on each sorted column is indicated (within the triangle symbol) the priority of the criteria applied among the columns.

3.5.2 Columns

From the sub-menu **Columns** it is possible to carry out the following functions:

- Hide Column: allows to hide the selected column;
- Customize: allows to recover the hidden columns and to shift the positions of the columns (in alternative to the Drag&Drop);
- Autofit Column: resizes the column length on the basis of the contained data;
- Autofit All Columns: resizes all the columns length on the basis of the contained data.

3.5.3 Other functions

Other available functions which can be accessed through the settings pop up (right clicking on the header of columns) are:

- **Colors → Background**: Sets row background colour based on market or data availability, instrument status, price, movements, etc.;
- **Colors → Foreground**: Sets row text colour based on market or data availability, instrument status, etc.;
- **Font**: Sets font size;
- **Format**: Column values formatting (i.e. number of decimals displayed etc.);
- **Buy/Sell Prices:** Sets Buy/Sell 'one Click' order entry properties;
- **Highlights Timeout**: Status change blinking duration;
- **Select:** Allows to select automatically all the rows that match the search condition;
- **Export to Excel**: exports selected rows to an Excel file.

3.6 Drag and Drop

BTS® adopts a pervasive implementation of the **Drag&Drop** mechanism. Specifically, the user can drag and drop (individual or multiple selected instruments) from and to the following windows:

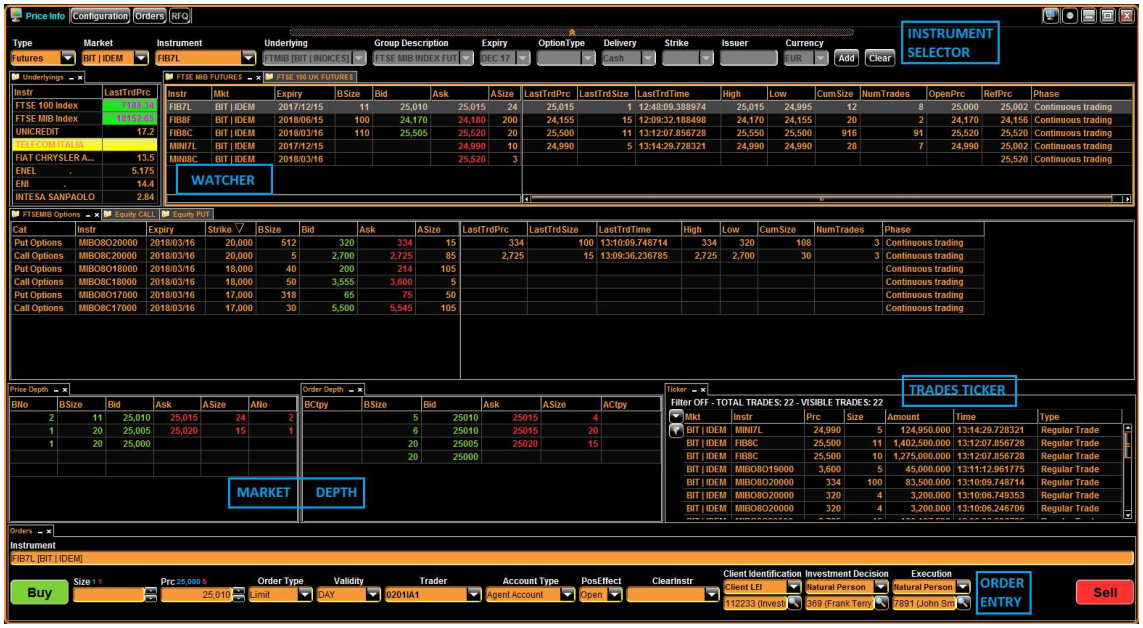
- from **Dictionary**, **Ticker** and **Trading Manager** (Orders and Trades pane) to **Price** Info watchers and Order Entry;
- from **Price Info** watchers to **Flex Combination**;
- from the **Price Info** watchers to the **Tickers**;
- from one **Price Info** watcher to another watcher;

Furthermore the **Drag&Drop** can be used for:

- shifting the position of the columns in all the windows;
- moving rows up and down in the **Price Info** Watcher pane and **Quoting** window.

4. MARKET DATA

4.1 Price Info



The **Price Info** window displays real-time market data for a set of financial instruments or indices selected by the user and allows order entry as well. The **Price Info** window can be opened by selecting the corresponding command in the Market Information menu. The window is made up by six sections/areas: **Instrument Selector**, the Watcher panes, two Market (Prices and Orders) Depth panes, the embedded Ticker, and the Orders Entry pane.

4.1.1 Instrument Selector

The **Instrument Selector** allows to select single or multiple instruments according to the criteria entered in the parameters set. The set of the selection parameters is the following:

- **Type**: contains the list of the asset type currently managed by BTS®. The Asset Type parameter is mandatory for carrying out the multiple selection and drives the enabling of the following parameters (i.e. Currency, Underlying, Expiry and Issuer);
- **Market**: contains the list of available markets belonging to the selected asset type;
- **Instrument**: contains the list of all the instruments included in the BTS® dictionary. In case a market has been selected, the instruments list refers only to that specific market. Multiple selection can be performed using the * character;
- **Underlying :** contains the list of all the Instruments Underlyings managed by BTS® for the selected market. This option is enabled only if a congruent Asset Type (i.e. Derivatives, Bond, etc.) has been selected;

- **Group Description :** lists the descriptions of all Instruments Group managed by BTS® for selected market This option is enabled only if a congruent Asset Type (i.e. Derivatives, Bond, etc.) been selected;
- **Expiry**: contains the list of the available expiration for the Asset Type/Market selected. This option is enabled only if a congruent Asset Type (i.e. Derivatives, Bond, etc.) has been selected;
- **Option Type :** allows to select the Option type (European or American). This option is enabled only if a congruent Asset Type (Derivatives, Options, Calls or Puts) has been selected;
- **Delivery Type :** allows to select the Delivery type (Cash or Physical). This option is enabled only if a congruent Asset Type (Derivatives, Future, Options, Calls or Puts) has been selected;
- **Strike :** lists the Strikes available for all the Instruments managed by BTS®. This option is enabled only if a congruent Asset Type (Derivatives, Options, Calls or Puts) has been selected;
- **Issuer**: users can manually insert a value in this field to search for Issuers for the Asset Type/Market selected. This option is enabled only if a congruent Asset Type has been selected.
- **Currency**: contains the list of all the currencies managed by BTS®;

After having filled the **Instrument Selector** parameters, clicking on the **Add** button all the instruments meeting the chosen criteria are entered in the selected Watcher pane. Alternatively, clicking on the **Clear** button, the values entered in the selection parameters are set to blank. Clicking on the orange double arrows button placed above the Selector, the parameters are hidden allowing to save room for displaying more information in the watcher pane.

4.1.2 Watchers

Real-time market data for the instruments selected is displayed in the **Watcher** pane. The default **Watcher** layout can be modified via the drag and drop mouse function. Each single column can be moved inside the Watcher by first placing the mouse cursor on its title bar, clicking the left mouse button and then dragging the selected column to the new position. Furthermore each row can be dragged and dropped within the **Watcher** pane in order to sort the displayed instruments according to the preferences of the user: this feature is available only if no columns has been ordered using ascending/descending sort function,

New Panes can be added to the **Watcher** area by selecting the New Pane option in the **Configuration** menu of the **Price Info** window.

4.1.3 Price Depth/Order Depth and Ticker Pane

Price Depth/Order Depth panes shows the aggregated orders by price level/disaggregated orders by time priority for the selected instrument in the Watcher pane

The **Ticker** pane displays real-time data related to all trades executed in one or more markets, also taking into account OTC trades and block trades. **Markets** to be monitored via the **Ticker** window can be selected using the **Markets** option in the **Configuration** menu or through the white arrow in the upper-left corner. Clicking on the funnel icon (red circled in the picture below), the list of trades is filtered according to the selected instrument in the watcher pane.

In order to remove the filter it is sufficient to click again on the funnel icon.

The instruments listed in the **Ticker** can be dragged and dropped into the selected Watcher pane in order to display the related market book.

4.2 Order Entry shortcut

It is possible to use pre-defined keys for quickly activating the Order Entry window as a separate window. Specifically, the available shortcuts for Derivatives instruments are the following:

Action	Shortcuts
Buy Order	F5
Sell Order	F9
New (Buy and Sell)	F7
Cross Order	F6
New Trigger Order	Shift F7
Buy Trigger Order	Shift F5
Sell Trigger Order	Shift F9
Flexco	F11
Strategy Wizard	Shift F11
Bundle Order Entry	Ctrl+Shift B
Third Party Entry	Ctrl+Shift P

See chapters Order Entry, Cross Order and Strategy Wizard for further information.

4.3 Derivatives Price Info

The **Derivatives Price Info** window gives a compact view of all the derivative instruments linked to the same underlying instrument or index. A tray created for each underlying will contain three panes: **Underlying**, **Futures, Strategies** and **Options**.

Several trays can be opened inside the same **Derivatives Price Info** window for different underlying instruments. The **Derivatives Price Info** window can be opened by selecting the corresponding command in the **Market Information** menu.

Select the underlying instrument or index through the **Ctrl+LeftMouseClick** command on the corresponding tab, the three above-mentioned panes will be displayed: the **Underlying, Strategies** and **Futures** panes will be already receiving real-time data from the corresponding markets, whereas for the **Options** one or more expiry dates are to be picked up from a selection list.

Options panes for different expiry dates can be added to the current tray in two different ways:

- through the **Show Expiry Date Pane** (clicking on the **Configuration** button), in this case a multiple selection list will pop up with the remaining expiry dates which the user can select to open one or more option panes;
- through the **Add Expiry Date Pane** (clicking on the **Configuration** button), in this case one pane will be added to the existing ones and the user can assign an expiry date through the **Ctrl+LeftMouseClick** command on the corresponding tab.

Futures, Strategies and **Options** panes can be-resized or moved inside the tray related to an underlying instrument, whereas the fields related to the underlying instrument are locked in the top part of the tray.

An embedded Price Depth can be displayed for each derivative instrument in the Futures, Strategies or Options pane by right-clicking on the corresponding row and selecting **Show Embedded Book** command.

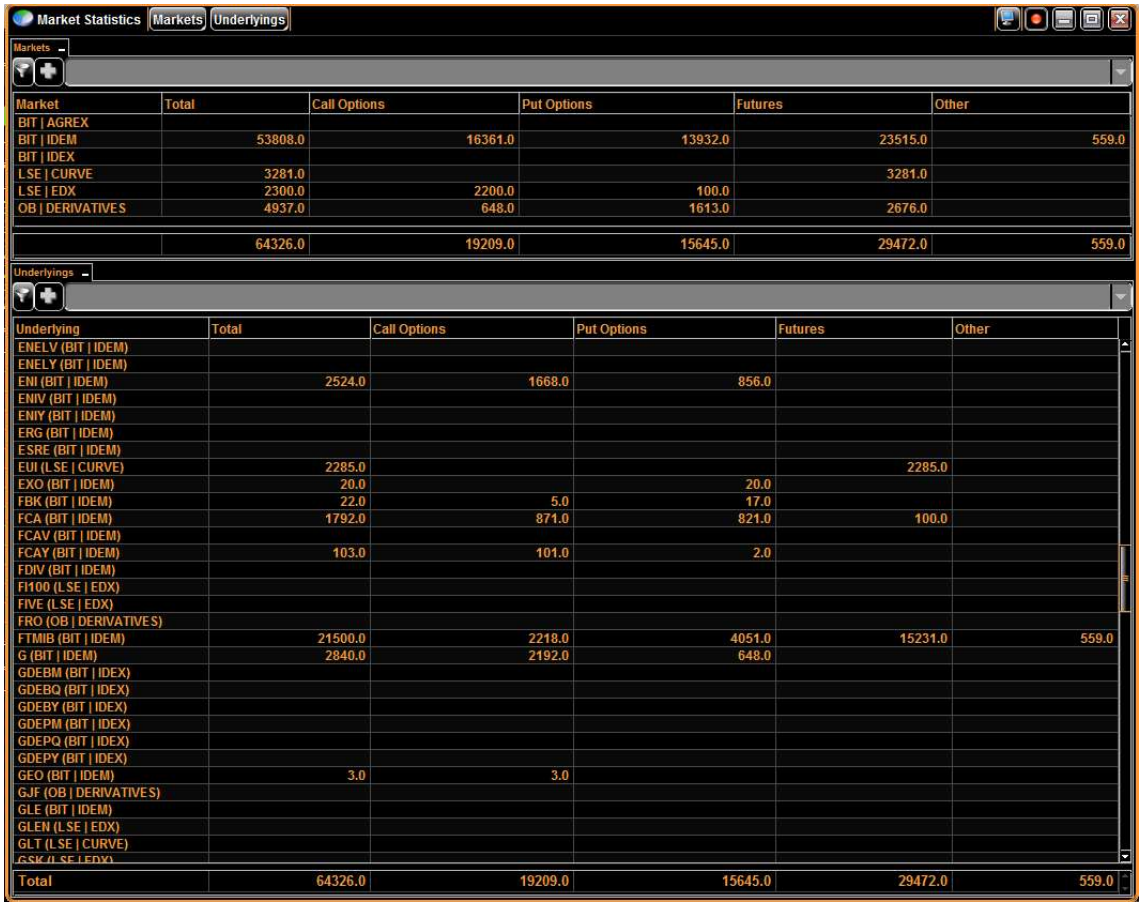
The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes it possible to insert the items which constitute each menu. Columns position can be shifted through the drag and drop mechanism.

4.4 Market Statistics

The **Market Statistics** window which can be opened by selecting the corresponding command in the **Market Information** menu. It consists of two panes: **Markets** (upper) and **Underlyings** (lower).

Market Statistics provides users with a breakdown of market trades sizes for derivatives markets per submarkets and, for each submarket, per underlying instrument respectively in the Markets and Underlyings panes. For each sub-market or instrument the following sizes are displayed: **Total**, **Call Options**, **Put Options**, **Futures**, **Other**; grand totals are calculated at the bottom of each pane.

The full list of **sub-markets/underlyings** can be reduced by applying a filter that can be defined by entering a string in the text field of the title bar. After entering a string and pressing the filter button, the list is filtered to contain only those **sub-markets/underlyings** the name of which matches the filter string, filters can be saved as well.



Market	Total	Call Options	Put Options	Futures	Other
BIT | AGREX					
BIT | IDEM	53808.0	16361.0	13932.0	23515.0	559.0
BIT | IDEX					
LSE | CURVE	3281.0			3281.0	
LSE | EDX	2300.0	2200.0	100.0		
OB | DERIVATIVES	4937.0	648.0	1613.0	2676.0	
	64326.0	19209.0	15645.0	29472.0	559.0

Underlying	Total	Call Options	Put Options	Futures	Other
ENELV (BIT | IDEM)					
ENELY (BIT | IDEM)					
ENI (BIT | IDEM)	2524.0	1668.0	856.0		
ENIV (BIT | IDEM)					
ENIY (BIT | IDEM)					
ERG (BIT | IDEM)					
ESRE (BIT | IDEM)					
EUI (LSE | CURVE)	2285.0			2285.0	
EXO (BIT | IDEM)	20.0		20.0		
FBK (BIT | IDEM)	22.0	5.0	17.0		
FCA (BIT | IDEM)	1792.0	871.0	821.0	100.0	
FCAV (BIT | IDEM)					
FCAY (BIT | IDEM)	103.0	101.0	2.0		
FDIV (BIT | IDEM)					
FI100 (LSE | EDX)					
FIVE (LSE | EDX)					
FRO (OB | DERIVATIVES)					
FTMIB (BIT | IDEM)	21500.0	2218.0	4051.0	15231.0	559.0
G (BIT | IDEM)	2840.0	2192.0	648.0		
GDEBM (BIT | IDEX)					
GDEBQ (BIT | IDEX)					
GDEBY (BIT | IDEX)					
GDEPM (BIT | IDEX)					
GDEPQ (BIT | IDEX)					
GDEPY (BIT | IDEX)					
GEO (BIT | IDEM)	3.0	3.0			
GJF (OB | DERIVATIVES)					
GLE (BIT | IDEM)					
GLEN (LSE | EDX)					
GLT (LSE | CURVE)					
GSK (LSE | EDX)					
Total	64326.0	19209.0	15645.0	29472.0	559.0

4.5 Dictionary

The **Dictionary** window displays reference data of all financial instruments and indices currently tradable in all the markets available to the user. Data is organized according to specific markets.

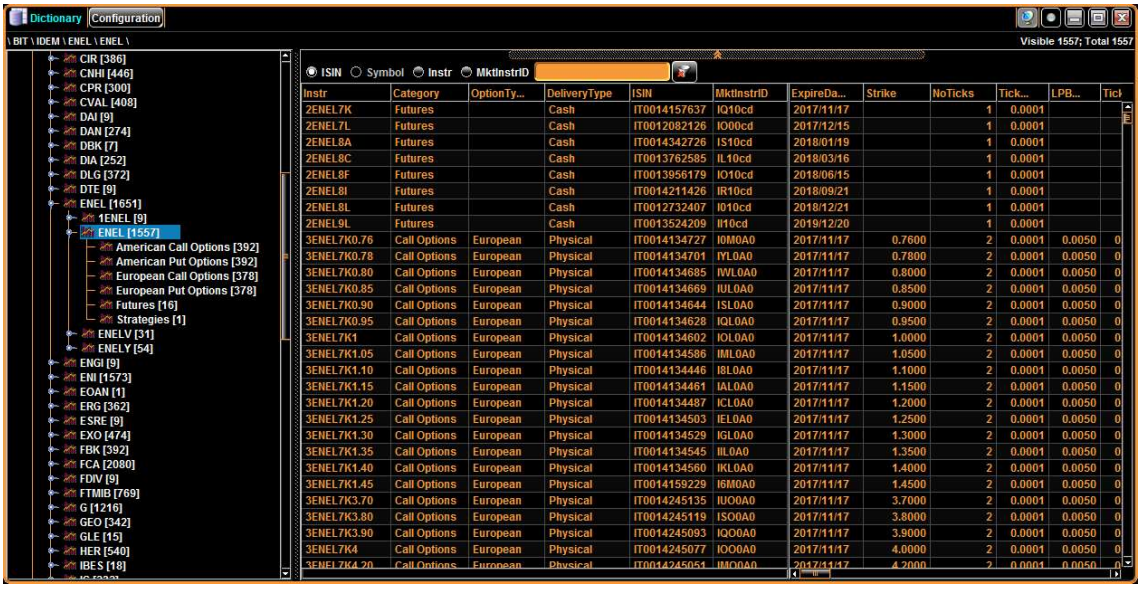
The **Dictionary** window can be opened in several ways:

- from the **Market Information → Dictionary** sub-menu in the main tool bar;
- by selecting the corresponding command in the Configuration menu of the **Price Info** window;
- from the following market data windows: **Trading Conditions**, **Order/Price Depth, Instrument Summary, Flexco, Order Entry** pane.

The **Dictionary** window is made up by a selection area and two frames: the left-side tree shows all the markets available to the user, whereas the right pane displays data for all instruments available in the selected market.

Once a market has been selected a list of all financial instruments and indices populates the right-side pane. By double-clicking one market a list of submarkets is shown below the market entry, the list of financial instruments in the right pane is further on restricted moving to Underlying (eg : ENEL) and then Class Symbol (1ENEL dividend future, ENEL standard futures and options, ENELV and ENLY weekly options).

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes it possible to insert the items which constitute each menu. Columns position can be shifted through the drag and drop mechanism.



4.6 Order/Price Depth

The **Order/Price Depth** window displays market depth and related real-time/static info for the selected instrument. The **Order/Price Depth** window can be opened by selecting the corresponding command in the **Market Information** menu of the top-level tool bar.

The window is made up by a selection area and up to four frames: **Market Depth**, **Orders**, **Info** and **Last 5 Trades**. In the screenshot below, the Market Depth area is placed under the menu bar and displays the best five Bid and Ask prices in real-time mode by price level (Price Depth) or by order entry (Order Depth). The Orders area is placed under the Market Depth area and allows orders entry. The Info area is placed at

the Market Depth area side and displays real-time/static info for the selected instrument. Last 5 Trades is placed in the lower right corner. Users can move these four frames by left clicking with the mouse on the tab and dragging it to the desired position.

4.7 Ticker

The **Ticker** window displays real-time data related to all trades executed in one or more markets, also taking into account OTC trades and block trades. Each new trade will be shown in the first row of the window table: at any time a system-defined maximum number of trades will be made available to the user. The Ticker window can be opened by selecting the corresponding command in the **Market Information** menu. As soon as a new market has been selected in **Configuration** menu, the last trade will be displayed.

Data flow for a given market will stop as soon as it gets removed from the set of active markets selected from the **Configuration** – Market menu.

Selection criteria of the trades to be shown in the **Ticker** window can be configured from the pane activated with the **Filter** command in the **Configuration** menu. The trades displayed in the **Ticker** table can be filtered by entering one or more instruments (separated by semicolon) in the Filter field. Instruments can be entered in the **Filter** field also using the drag and drop functionality (for instance dragging an instrument from the Orders section from the **Trading Manager** and dropping it in the **Ticker** Filter field). Fast filters can also be activated by right clicking on the column header and selecting the option **Quick Filter.**

4.8 Intraday

The **Intraday** window displays daily trades executed in a given market for a selected instrument. Data is not retrieved directly from the market feed but is stored in the application database. Since this is a query based window, data can be refreshed by selecting the Refresh command in the **Configuration** menu.

PTTCancAme...	Instrument	Prc	Size	Time	Type
New	FIB7L	24,990	2	16:06:44.746750	Regular Trade
New	FIB7L	24,990	1	16:06:49.210236	Regular Trade
New	FIB7L	25,000	1	16:08:05.388025	Crossed Trade
New	FIB7L	25,000	1	16:15:39.608702	Crossed Trade
Cancelled	FIB7L	25,000	1	16:16:03.666964	Trade cancellation
New	FIB7L	25,000	10	16:20:59.916346	Regular Trade
New	FIB7L	25,000	10	16:20:59.917021	Regular Trade
New	FIB7L	25,000	2	16:20:59.918341	Regular Trade
New	FIB7L	25,000	10	16:21:18.387757	Regular Trade
New	FIB7L	25,000	11	16:21:18.387757	Regular Trade
New	FIB7L	25,000	10	16:21:20.381256	Regular Trade
New	FIB7L	25,000	11	16:21:20.381256	Regular Trade
New	FIB7L	25,005	10	16:21:33.228959	Regular Trade
New	FIB7L	25,000	10	16:21:34.738912	Regular Trade

Users can display data listed inside the **Intraday** window by filtering them. It is possible to display the **Filter** pane of the **Intraday** window by selecting the **Filter** command in the **Configuration** menu. Each filter must be enabled before entering the suitable settings for its use. The Intraday window can be filtered via: **Trade Price, Trade Size, Trade Time, Trade Type**.

Data can be extracted from the **Intraday** Table and copied into an Excel spreadsheet.

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes possible to insert the items which constitute each menu. **Columns** position can be shifted through the drag and drop mechanism.

5. QUOTING

BTS® platform provides market makers with a high-performance environment for automated quoting of multiple instruments across several markets and/or information providers. Prices can be injected into the BTS® quoting engine from several sources:

- external pricing engines through either native APIs or the **BTS**® multicast message bus;
- direct market feeds;
- Excel spreadsheets running on any LAN or WAN workstation;
- manual input.

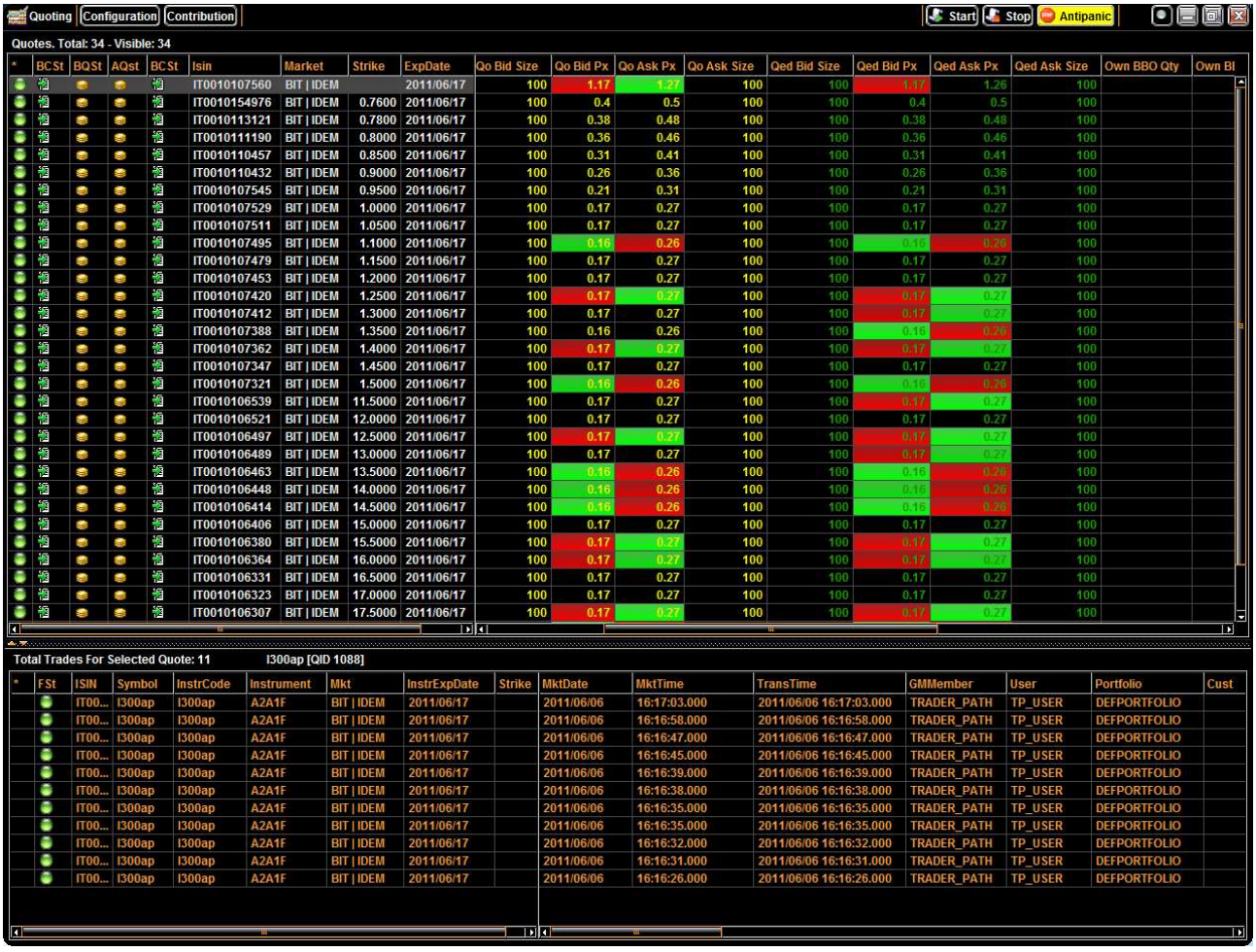
In the following only a high level description of the Auto Quoting window is provided. Detailed information and instructions about BTS® Quoting capabilities can be found in the BTS® Quoting Manual.

5.1 Auto Quoter

Quoting Manager window allows users to control and monitor single and/or double quotes in multiple markets, after setting them up. Each **Quoting Manager** window consist of two areas: **Quotes** (upper) displaying quotes set up by the user and **Trades** (lower), showing all Ask or Bid trades related to the highlighted quote. The default **Quoting Manager** window layout can be modified according to the user's needs by clicking the arrows located above the Trades pane in order to respectively maximize the **Trades** and **Quotes** areas or to restore the default layout.

The **Quoting Manager** window can be opened by selecting the **Auto Quoter** command in the **Quoting** menu of the top-level tool bar.

The Quotes Area of the **Quoting Manager** displays all the quotes defined by the user via the Quote Setup Wizard in the Quotes table. The Quotes table consists of two parts: a non-scrollable pane on the left and a scrollable pane on the right. By default columns identifying quote status, quoted instruments and contribution market are in the left pane, whereas columns such as those covering data sources, adjustment formulas, adjusted prices, quoted prices make up the right pane.



The **Trades Area** of the **Quoting Manager** window displays executed **Ask** and **Bid** Trades for the quote selected in the **Quotes Area**. Basically, this is an information window, displaying data and values only.

5.2 Excel Data Setup

The **Excel Data Source Setup** allows the configuration of subscription classes to Excel files and the assignments of a single class to a new data source for the contribution. A subscription class is a set of info identifying data to be sent to the quotation service for an instruments group together with the fields that identify the request Key for the single group instrument.

The **Excel Data Source Setup** window is made up by two **areas**:

- the **Member/User/Class** area on the left;
- the **Data Source** area on the right.

The **Member/User/Class** tree is made up by multiple rows structured as a two-level hierarchical tree: a root item for the **Member** and one or more Users items, each showing one or more predefined **Classes.**

An **Excel Data Source** can be assigned to a specific user's class pressing **New DS** button and then entering the **Data Source** and the Book (.xls file) names, together with the Range data in the corresponding fields.

A **Range** row is made up by multiple fields, some of them are of orange colour and identify Key fields. Each configuration can be saved only if data is entered in **Data Source Name**, in the **Book** or in one or more Range fields.

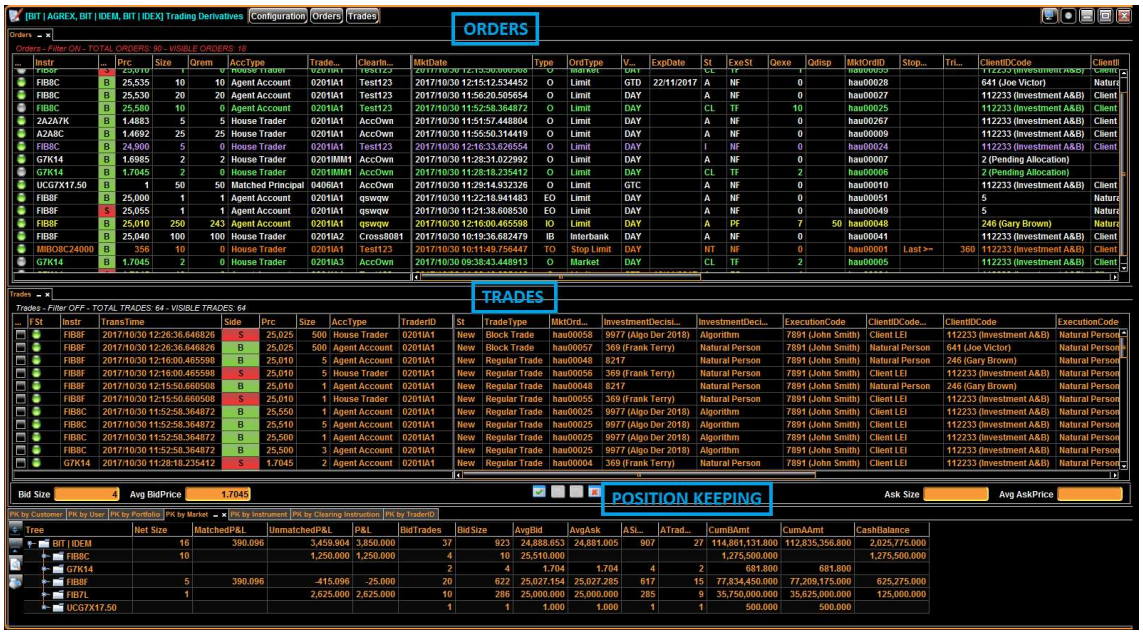
6. TRADING

6.1 Trading Manager window

The **Trading Manager** window allows to perform all trading operations. It shows orders and trades for markets which may be selected via the Markets options in the **Configuration** menu. Several **Trading Manager** windows can be opened for one or more markets.

Depending on the functionality level set for the group the user belongs to the **Trading Manager** window displays only the orders and trades related to the user (functionality level: operator) or all the orders and trades of all users belonging to the same member (functionality level: member).

The **Trading Manager** is made out of three sections: **Orders** (upper)**, Trades** (middle) and **Position Keeping** (lower).



6.1.1 Order Management Sub-Window

The **Orders** Section shows all orders, triggered orders and cross orders entered by the user (or all users of the member, depending on the functionality level) into the selected markets. Each order is shown as a single row marked with its most recent status. Right clicking on a selected order row an options list pops-up.

Clicking on the items of the list the following actions can be performed:

- **Modify:** allows to change price and size of the order entered;
- **Remove:** cancels order form the market and orderbook;
- **Deactivate:** cancels order from market but keep it on orderbook in "inactive" status;
- **Duplicate:** proposes a new order entry window filled with the same values of the selected order;

- **Show History:** displays the history of the selected order;
- **Order/Price Depth:** opens the Order/Price Depth window for the instrument of the selected order;
- **Outbound Hand-Over:** allows a user to transfer the control of its own order to another company user.

6.1.2 Trades Sub-Window

The **Trades Section** shows all trades executed from orders, cross orders and double quotations entered by the user (or all users of the member, depending on the functionality level) into the selected market.

6.1.3 Position Keeping Sub-Window

The **Position Keeping** Section is located below the **Trades** section of the **Trading Manager** window. This area displays the trader's position and Profit&Loss (if the functional level is operator) or the company's position and Profit&Loss (if the functional level is member), depending on the functionality level set for the trading tool. The positions are aggregated according to different criteria, generating the following views:

- Clearing Instruction (Derivatives markets specific);
- Customer;
- Portfolio;
- User;
- Market;
- Instrument.

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes it possible to insert the items which constitute each menu. Columns position can be shifted through the drag and drop mechanism.

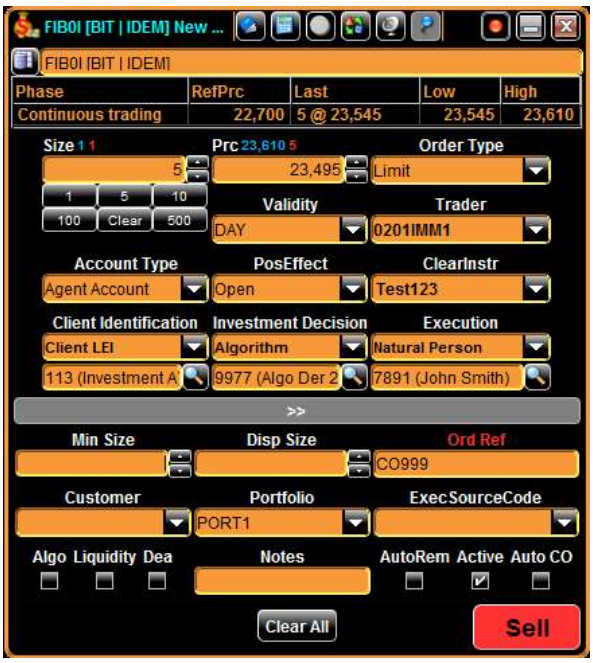
6.1.4 Order Entry

The **Order Entry** window can be opened via the **Orders** menu of the **Trading Manager** window and also through the **Price Info** window. Furthermore, it is possible to use pre-defined keys for quickly activating the **Order Entry** window as a stand-alone window. The available shortcuts are as follows:

Action	Shortcuts
Buy Order	F5
Sell Order	F9
Order (Buy or Sell)	F7
Cross Order	F6
New Trigger Order	Shift F7
Buy Trigger Order	Shift F5
Sell Trigger Order	Shift F9
Flex Combination	F11
Strategy Wizard	Shift+F11
Bundle Order Entry	Ctrl+Shift B
Third Party Entry	Ctrl+Shift T

The **Buy** or **Sell** (or both) **Order Entry** window can be used in a **minimal** format, showing few fields, buttons and check boxes or can be **maximized** to show additional optional fields, depending on the selected instrument and the user's needs.

Order Entry (minimal view)



Order Entry (maximized view)

By clicking the >> button placed at the bottom of the **Order Entry** window an extension pane containing additional fields to be entered by the user is shown below the main one. Fields displayed in this extension pane may differ depending on the selected market. When some values have been entered in the **Additional Order Fields** pane the button >> colour will change to **red**. As said before, once activated, the **Additional Order Fields** pane is displayed at the bottom of the Order Entry window (**Buy**, **Sell** or both) and its content is strictly connected to it. Users can hide the extension pane at any time, restoring the **minimal** view, by clicking the >> button placed on top of it.

A slight different **Order Entry** window is also available for **Stop Order**:

Order Entry (**Stop Order**)

6.1.5 Historical Trades

The Historical Trades window gives the possibility to query the trades executed (by BTS user/ BTS member or, in case Drop Copy feed is in place by the whole market member) in the last 120days.

The tool can be reached from Trades Menu and Alt-T short cut keys:

The applicable conditions are:

- Trade Date interval
- Trade Time interval
- Transaction Date Time Interval
- Market
- User (BTS)
- Instrument

- Side
- TradeID
- Status (new, modified, cancelled)
- Portfolio
- Counterparty

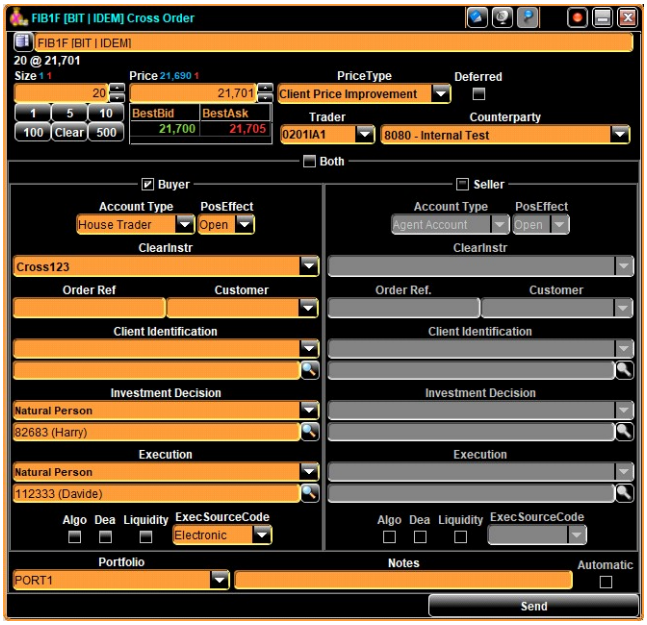
6.2 Cross Order

This function can be used to match two orders of opposite side for different accounts within the same member without exposing them to the market.

A **Cross Order** entry window can be opened by:

- right clicking in the watcher pane area of the **Price Info** window or, alternatively, pressing the key button **F6** on the keyboard, after having selected one instrument;
- selecting the **Cross** item in **Orders** menu of the **Price Info** window.

Order Entry window (**Cross Order**)



Order Entry window (CPI **Interbank Order**)

A **Cross Order** is created by checking the **Both** check box, whereas the selection of the **Buyer** or **Seller** check box allows to create a **Buy** or **Sell Committed Order**.

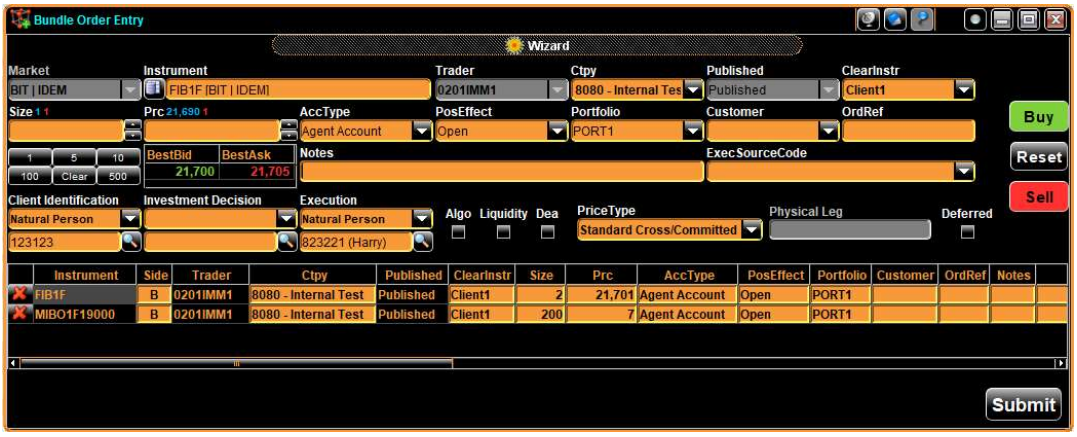
By Default PriceType is **Standard Cross/Committed**, but **Client Price Improvement (CPI)** can be selected

6.3 Bundle Order and Third Party

This function can be used to submit a pre negotiated transaction to the Market that will be forwarded to involved members for confirmation.

A **Bundle Order or Third Party entr**y window can be opened by:

- right clicking in the watcher pane area of the **Price Info** window or, alternatively, pressing CTRL+Shift+B or P on the keyboard, after having selected one instrument;
- selecting the Bundle Order or Third Party entry items in **Orders** menu of the **Price Info** window.



Bundle Order Monitor and Third Party Monitor help the creator of the transaction to monitor the status of each legs of the proposal:

Bundle Order/Third Party Manager lists the proposal to be accepted by the member as counterparty of the transaction.

6.4 Flexible Combination Order (Flexco)

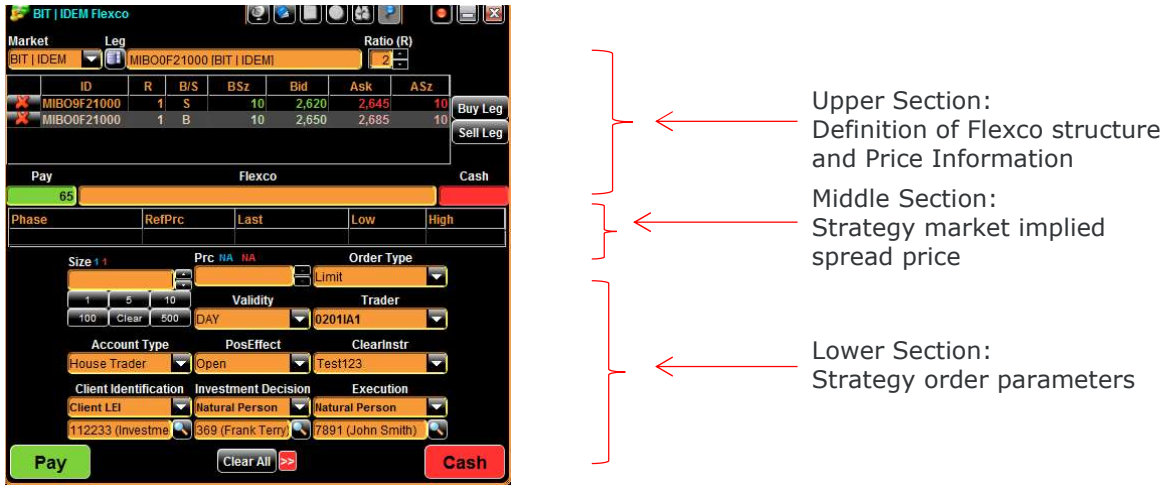
Flex Combination (**Flexco**) are available on Derivatives markets only (IDEM,) and provide a mechanism to create and trade combinations of financial instruments (currently up to 4), usually defined as legs, from the same market. Once a **Flexco** has been defined it is forwarded to the market where it acquires a standard name. The **Flexco** can be traded as a new financial instrument and all trading and watching operations are allowed on it.

A **Flex Combination** entry window can be opened by:

- right clicking in the watcher pane area of the **Price Info** window or in the Futures/Options panes of the **Derivatives Price Info** window and selecting the item **Flexco** from the proposed options list (or, alternatively, pressing the key button **F11** on the keyboard, after having selected one instrument);
- selecting the **Flexco** item in Orders menu of the Price Info window;
- selecting the **Flexco** item in the Orders menu of the Trading Manager window.

To create a **Flexco** the user can select up to 4 legs: for each leg, it's possible to pick up a tradable instrument in the Leg combo box, specify the **Ratio** and add it to the combination by clicking the **Buy Leg** or **Sell Leg** button at the right of the Legs list. The selected legs are displayed under the Leg combo box: the leg sequence doesn't affect the **Flexco** creation. The same leg can't be added twice. Before placing an order on a new **Flexco**, the user can modify the **Ratio/Side** value for one or more legs. The creation of a **Flexco** takes place only when the user enters an order for it.

A Flexco window is divided into three different sections:



1) Upper section, **Flexco structure**: the first section is about the creation of the **Flexco** structure. In order to create a **Flexco** the user has to choose the two instruments (legs) that will compose the combination. Each leg can be selected according to the following:

   a) By entering the leg name into the instrument box, setting the **Ratio** (default is 1) and then clicking on BUY LEG /SELL LEG button in order to populate the legs box;

   b) By dragging the instrument from the Price Info window (or the Derivatives Price Info or the Instrument Dictionary) and then dropping it into the legs box. In this

case the side of each leg is set by default to "BUY" and ratio 1: after the dropping the user can change the side selecting the leg and then clicking on "SELL LEG". Ratio can be changed as well, selecting the leg, modifying the Ratio and then confirming the leg side.

When the instrument is added to the legs box, automatically the real time market information is displayed.

2) **Strategy Market Implied Price** (middle section): the second section displays the market implied spread price (if existing) for the strategy (**the two fields are NOT editable**).

   a) If the current market implied spread price is positive the PAY field is populated (i.e. the market is on bid for immediately executing one lot of the strategy);

   b) If the market implied price is negative the CASH field is populated (i.e. the market is on offer for immediate execution of one lot of the strategy).

   The strategy market implied spread is updated real-time according to the change of the best bid/offer of the individual instruments composing the combination.

3) **Strategy Order** (lower section): the third section of the window is about the order parameters that will be entered on the combination once created.

   a) Price: this is the spread price requested by the user for trading the strategy: this field allows values positive or equal to zero;

   b) **PAY / CASH** buttons:

   - if the **PAY** button is clicked, the user is wants to pay the specified price for trading one lot of the created strategy;

   - if the **CASH** is clicked, the user wants to get at least the specified price for trading one lot of the created strategy.

After the **PAY/CASH** button has been clicked, the system prompts the user to confirm the strategy creation. Once the strategy creation has been confirmed, a pop-up window with the strategy final composition is displayed and the corresponding code is shown in the middle section of the Flexco window.

The new synthetic instrument can be dragged from here and dropped in the **Price Info** window in order to show the related best prices or in the **Price Depth/Orders Depth** to show the corresponding order book.

6.5 Strategy Wizard

Multi-legged options trading is made available to traders who can dynamically create multi-legged strategies and enter single orders (standard, cross, committed) to buy and sell a number of different options simultaneously. The following strategies can be created via the Strategy Wizard window: **Straddle**, **Strangle**, **Call Spread**, **Put Spread**, **Combo**, **Conversion-Reversal**, **2x1 Ratio Call Spread**, **2x1 Ratio Put Spread**, **Guts**, **Call Calendar Spread**, **Put Calendar Spread, Straddle vs. short Call, Short Straddle vs. long Put, Call Butterfly, Put Butterfly, Call Ladder, Short Put Ladder, Short Straddle Calendar Spread, Iron Butterfly, Call Condor, Put condor, Box spread, Short call spread vs long put, Short put spread vs long call, Short diagonal straddle calendar spread** as well as **Flex Combination** (**Flexco**).

Strategy name	N. of legs	Description (for long position / buy)
Flexco	**2 to 4**	**Combination of derivative instruments**

Strategy name	N. of legs	Description (for long position / buy)
Straddle	2	Buy a call and a put at the same strike and at the same expiry date
Strangle	2	Buy a put and a call at higher strike and at the same expiry date
Call Spread	2	Buy a call and sell a call at higher strike price and at the same expiry date
Put Spread	2	Sell a put and buy a put at higher strike price and at the same expiry date
Combo	2	Buy a put and sell a call at higher strike price and at the same expiry date
Conversion-Reversal	2	Buy a call and sell a put at the same strike price and at the same expiry date
2x1 Ratio Call Spread	2	Sell a call and buy a call at higher strike price and at the same expiry date
Guts	2	Buy a call and buy a put at higher strike price and at the same expiry date
Call Calendar Spread	2	Sell a call and buy a call at the same strike price with a longer expiry date
Put Calendar Spread	2	Sell a put and buy a put at the same strike price with a longer expiry date
Straddle vs. short Call	3	Buy a call and a put at the same strike (and at the same expiry date), sell a call at higher strike
Short Straddle vs. long Put	3	Sell a call and a put at the same strike (and at the same expiry date), buy a put at a lower strike
Call Butterfly	3	Sell two calls at a middle strike, buy two calls each at lower and higher strike (all with same expiry date and with strikes equidistant)
Put Butterfly	3	Sell two puts at a middle strike, buy two puts each at lower and higher strike (all with same expiry date and with strikes equidistant)
Call Ladder	3	Buy call, sell call at higher strike and sell call at equally higher strike (all with same expiry date and with strikes equidistant)
Short Put Ladder	3	Buy put, buy put at higher strike and sell put at equally higher strike (all with same expiry date and with strikes equidistant)
Short Straddle Calendar Spread	4	Buy Call and Put in near month, sell Call and Put in far month, all at same strike
Iron Butterfly	4	Sell a put and a call at a middle strike, buy a put at a lower strike and a call at a higher strike (all with same expiry date and with strikes equidistant)
Call condor	4	Sell two calls at middle equidistant strikes, buy two calls each at lower and higher strike (all with same expiry date and with strikes equidistant)
Put condor	4	Sell two puts at middle equidistant strikes, buy two puts each at lower and higher strike (all with same expiry date and with strikes equidistant)
11. Box spread	4	Buy call and sell put at same strike, buy put and sell call at higher strike (all with same expiry date)

Strategy name	N. of legs	Description (for long position / buy)
Short call spread vs long put	3	Buy put at lower strike, sell call at middle strike and buy call at higher strike (all with same expiry date)
Short put spread vs long call	3	Buy put at lower strike, sell put at middle strike and buy call at higher strike (all with same expiry date)
Short diagonal straddle calendar spread	4	Buy call and a put in near expiration, sell a call and a put in more distant expiration with different strike.

In the upper section of the window Strategy composition can be defined.

User chooses the Market, Strategy Name and Underlying a prepopulated table will be presented depending on the selected Strategy.

Then, for each leg the instrument can be identified by selecting; Delivery Type, Option Type, Expiration Month/Year and Strike Price.

Once a strategy has been forwarded to the market, a pop-up window is automatically opened showing the final composition of the strategy and the corresponding code is shown in the middle section of the **Strategy Wizard** window.

6.6 Care Order Management

The **Care Order Manager** is a multi-market window showing the user's own care orders. The **Care Order Manager** consists of a **Menu Bar** and a **Care Orders** Area.

Depending on the functionality level (operator or member) of this window set for the group the user belongs to the **Care Order Manager** window displays only the care orders related to the user (functionality level: operator) or the care orders of all users belonging to the same **member** (functionality level: member).

The **Care Orders Area** is located under the **Care Order Manager** window tool bar. It displays all care orders entered by the user. The Care Order Area is made up by multiple rows [Care Orders] structured as a two-level hierarchical tree. By clicking the icon placed at the left-side of each parent order the tree opens up, thus showing all related child order(s).

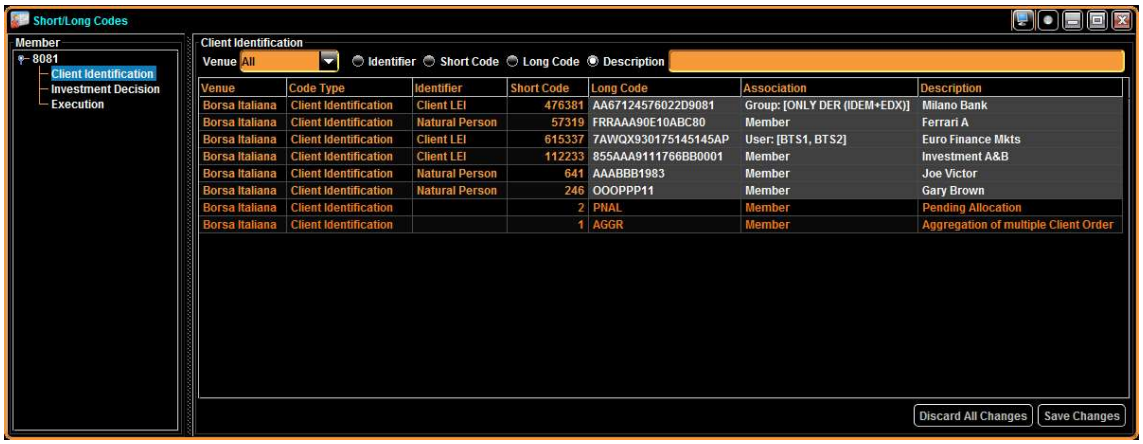
It is possible to create one or more **Child Orders** without exceeding the maximum capacity of the **Parent order**, by first highlighting a **Parent order** in the Care Orders Area and then selecting the Trade Care Order command in the Trading menu, right clicking the mouse on the specific row or via the [Ctrl-F7] function-key. **Child orders** exceeding the remaining parent order capacity will be rejected by the BTS® platform.

The **Child Orders** created by the user are displayed in the Care Orders Area as a two-level hierarchical tree of the parent order and are sent to the market.

The settings pop up is visualized by right clicking the mouse on the columns header whereas right clicking on the menu bar makes it possible to insert the items which constitute each menu. Columns position can be shifted through the drag and drop mechanism.

6.7 Short/Long Codes

Short/Long Codes tool allows BTS® user to manage Client Id, Execution and Investment decision codes that has been introduced with MIFID II regulation.



The codes can be bulk uploaded using the same file format requested by the member portal.

Each code is identified by a unique combination of Code Type (Client Identification, Investment Decision, Execution), Identifier (LEI, Natural Person, Algorithm) and Short Code.

Other than these mandatory fields, the Long Code and a Description can be associated to the Short Code. By properly configuring the association it would be possible to assign the Short Code to a specific subset of BTS users.

By default PNAL (2), AGGR (1) Client Identification codes and CLIENT (3) Execution Code are proposed.

Once listed in the Short/Long Codes window, the codes can be retrieved from each Transaction Entry window by typing the Short Code, Long Code or Description.

Please refer to Borsa Italiana website for detailed information and instructions about MIFIDII short/long codes :
http://www.borsaitaliana.it/borsaitaliana/mifid2/guidelinesfororderrecordkeeping_pdf.htm?wb48617274=80722326

6.8 Clearing Instruction link to Short Codes

The Clearing Instruction Setup can be found in General Settings menu.

Using this window BTS® user can set a link between Clearing Instruction and Short Codes (Client Identification , Investment Decision, Execution).

By using a linked clearing instruction in Order Entry window the Short Codes will be automatically filled out as per active configuration.

In case a link is not active, the value will be retrieved from Default Setup :

7. PRICING

In order to set up the parameters required for real-time calculations the following functions are provided via the Pricing menu of the top-level tool bar:

- • Derivatives Settings;
- • Interest Rate.

7.1 Derivatives Settings

Parameters required for real-time calculations can be set up by underlying instrument for all expiry dates or for selected ones, covering futures and options in either case.

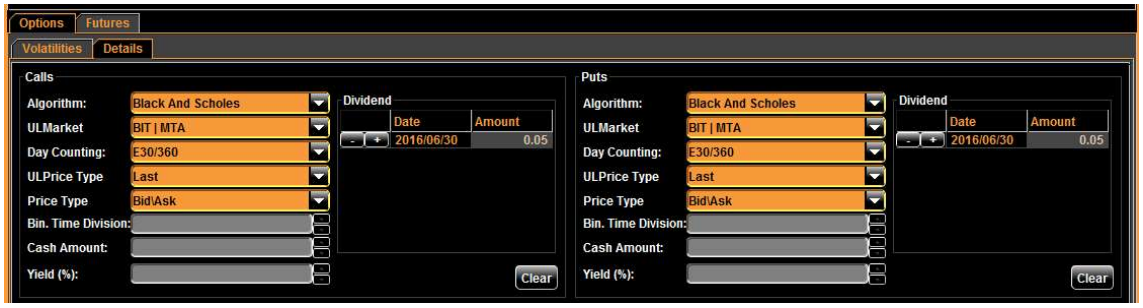
The first step of this process is the selection of an **underlying** instrument in a given market, possibly for a specific **expiry date**.

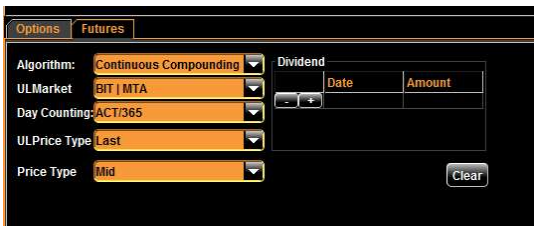
Once an **underlying** instrument has been added to the top table of the **Derivatives Settings** window the following values can be assigned to it: **AdjBid, AdjAsk, OverrideBid, OverrideAsk**.

The form is made up by two panes i.e. **Options** and **Futures,** with the former including two sub-panes Volatilities and Details.

The **Volatilities** sub-pane allows entering volatility values to be used in the calculation of **theoretical prices** for call and put options. Default values to be applied to all derivatives on the current underlying instrument must be assigned to the GENERAL entry, whereas different values can be entered for individual options. A set of commands at the right-hand side allows to assign/modify volatilities by instrument, option type or side.

The **Details** sub-pane is used to select the algorithm to be applied by the **Pricing Service** in order to calculate real-time data for all options on the current underlying instrument and enter all the input values required by the specific algorithm.





The **Futures** pane is used to select the algorithm to be applied by the **Pricing Service** in order to calculate real-time data for all futures on the current underlying instrument and enter the input values required by the specific algorithm.

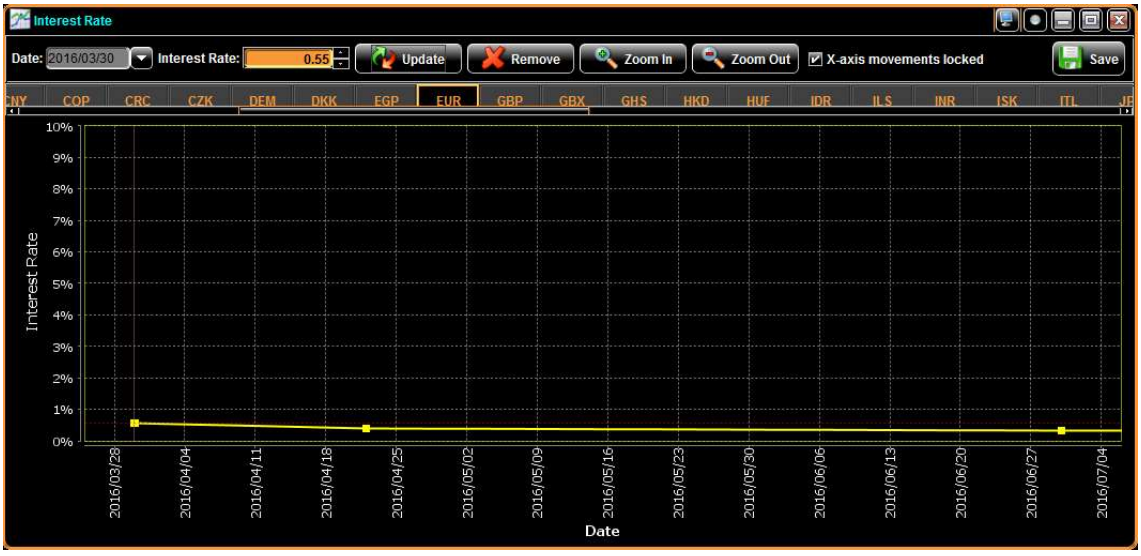
7.2 Interest Rate

All the algorithms used in real-time calculations require interest rate curves to be defined for the currencies that derivatives instruments are traded in. After selecting a currency by clicking on the corresponding pane tab, users have two options to enter discrete values for interest rate curves:

- Via **Calendar** toolbox and the **Interest Rate** field;
- Double-clicking the desired value for a given date directly in the chart pane.

The so defined parameters will be graphically displayed in the chart pane of the **Interest Rate** window.

Previously-defined curve values can be subsequently modified via the **Calendar** toolbox and the **Interest Rate** field, via drag and drop a specific node along the Y-axis and finally double-clicking above or below a specific curve node along the Y-axis to modify its value.

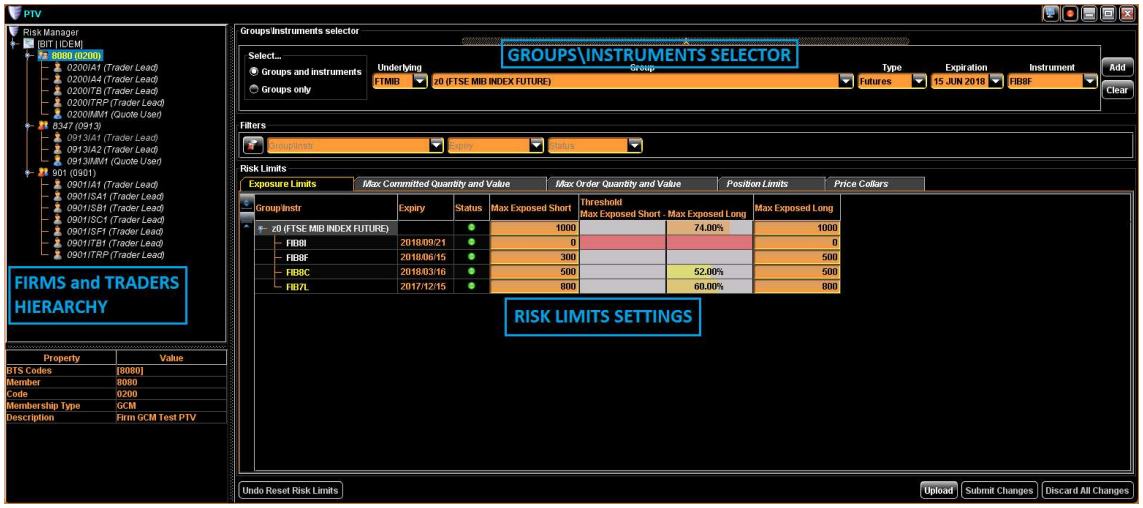


7.3 Options Calculator

The **Options Calculator** window can be used for one-off calculation of theoretical price, risk ratios or Greeks and implied volatility for any individual option: theoretical prices will always be calculated using **Black-Scholes, Black 76** and **Binomial AM algorithms**. It is possible to activate this functionality via the Pricing menu of the top-level tool bar by clicking the **Options Calculator** option. The list of values to be entered by the user is displayed in the left section while calculated values will be displayed in the right-hand table of the window after pressing the **Calculate** button. Furthermore a set of new values can be entered after pressing the **Clear** button.

8. PRE TRADE VALIDATION SERVICE

The Pre-Trade Validation Service (PTVS) complements the risk control systems in place by market participants to control order flow activity.



The PTVS provides an additional tool for:

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

The PTVS allows the Risk Manager to set pre-trade controls for a specified Managed Entity (i.e. a single TraderID or a group of Trader IDs associated with a Firm) and at different levels, in particular:

- Firm / Group of Trader IDs / Instrument Group / Instrument
- Firm / Group of Trader IDs / Instrument Group
- Firm / Instrument Group / Instrument
- Firm / Instrument Group.

The following limits can be configured:

- Max Order Quantity and Value limit (for orders and quotes)
- Max Cross/Committed Order Quantity and Value
- Position limit on executed trades (net long/short position, excluding cross trades) during the day, expressed in quantity terms;
- Exposure limit on open orders (excluding quotes) plus executed trades (net long/short position) during the day (cross orders and related trades do not contribute to limit computation), expressed in quantity terms;
- Price Collars limits;
- Kill Switch functionality, allowing to cancel all orders (cross orders included) and quotes for a TraderID and to disable a TraderID / Firm;

- Market Maker Protection to control quoting activity of Managed Entity (in case of conflicts, the most restrictive rules will apply).

Based on configurations defined by the Risk Manager, the Market will perform real-time checks before allowing each order and quote to enter the Trading System; configured limits can be updated real-time with immediate effectiveness.

The Market will disseminate messages related to the "usage" of the predefined Position and Exposure limits ("Risk Limits Usage Notice"): starting from 50% of the threshold upwards an alert is disseminated each time a 10% interval changes (e.g. 50%, 60%,70%, etc.).

Moreover, the following events will trigger an alert (Message and/orSound) in Messages viewer window:

- Kill Switch activation.
- Market Maker Protection limits change.
- Risk Limits change.
- Threshold of Exposure or Position limits update.

For a complete documentation please refer to :

BTS PTV manual

IDEM guide to PTV Functionality

9. AUTHORIZATION SERVICE

The **Authorization Service** can be accessed by selecting the corresponding command in the Tools menu.

This window is made up by two areas:

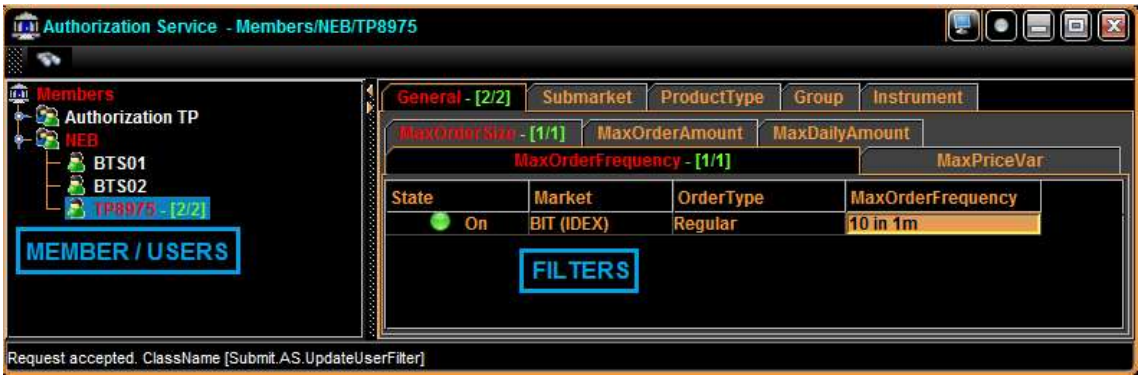
- the **Members** or **Company** area on the left;
- the **Filters** area on the right.

The **Members** or **Company** tree has a root item for the **Company** and one or more User Group items, each showing one or more **Users** according to the company structure set up by the system administrator via the Administration Console.

Filters can be set on either **member** or **user** group or user basis and can be defined on five levels, i.e.: **General, Submarket, Product Type, Group, Instrument**.

By double clicking the **Company** item it is possible to show/hide all the User Groups that populate the company.

In a similar manner, by double clicking a **User Group** name it is possible to show/hide the list of Users making up the selected group.



In order to add a **new filter**, an item (member, user group or user) has to be selected in the tree area and then the mouse has to be moved onto one specific pane in the **Filters** area. By clicking the right mouse button a pop up menu appears with the **Add** command which will add a new line in the **Filters** area, the **Remove** command will delete it.

Filters can be saved by selecting the corresponding tree item and clicking the right mouse button. A pop-up menu appears with the **Update** command, which will save all filter values for the current level. After moving to another tree item without saving changes for the previous one, it will be shown in yellow until changes at this level will be made permanent.

Further information about Authorization can be found in **Authorization Service Guide.**

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