Strategy - Hedging

Hedging section has two tab: Settings e Charts which will be analyzed.

Video Tutorial

| 4 | 24/03/2016 | Hedging - Cos'è l'hedging - Didattico | 11:42 |
|---|------------|---------------------------------------|-------|
| 4 | 24/03/2016 | Hedging - Impostazioni | 18:44 |
| 4 | 24/03/2016 | Hedging - Analisi | 12:52 |

Clickhere to watch other video Video di Iceberg

Settings

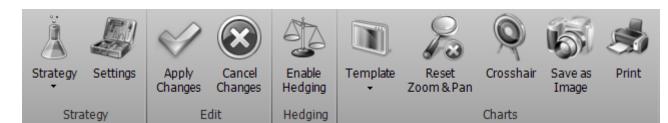
In "Settings" is present the Wizard which allows the user to choose a hedging typology. On the right, the panel summarizes the settings .

The low section summarizes the strategy with leg, the payoff, the greeks course and the trades.



Il menu - Settings

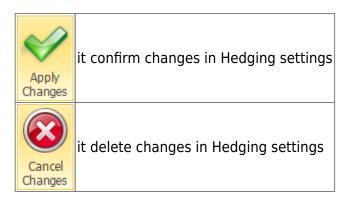
en:hedging http://manuals.playoptions.it/Iceberg_old/en/hedging?rev=1472545050



Strategy

| Strategy | open the sub-menu Strategy |
|---------------|---|
| New Strategy | it allows to create a new strategy |
| Open Strategy | it allows to open a previous saved strategy |
| Save Strategy | it allows to save the strategy in use |
| Settings | open the window Strategy Settings for strategy settings |

Edit



Hedging



Charts

| Template | open the sub-menu "Template" |
|---------------------|--|
| Load Template | it allows to save the template of the payoff in use. Il template is the configuration of the Payoff |
| Save Template | it allows to load template previously saved and apply them to the payoff in use |
| Save as Default | it allows to save template in use as default for the next payoff |
| Reset Zoom & Pan | it allows to reset the zoom |
| Cross Hair | it allows to enable or disable the Crosshair for the payoff |
| Save as Image | it allows to save the payoff of the strategy in image format (*.png). The image will be saved to the Pictures folder of beeTrader, in the user's Documents |
| Print | it allows to print the Payoff of Strategy currently in use. Feature available on the PC in use if there is a printer |

Hedging Type

| Hedge Type Thresholds 🗸 | Hedging Type |
|---|---|
| Continuos Hedge: this type of hedging mantains the smallest possible Delta for the entire strategy life. As the strategy is risk-neutral towards underlying price movements, the final gain will be similar to interest | Thresholds ON / OFF Assets to Use Orders Type |
| risk-free rate. Thresholds Hedge: this type of hedging mantains the smallest possible Delta only when the thresholds are hit. As the strategy is not always risk-neutral towards underlying price movements, the final gain is obtained when the strategy is not hedged. | Frequency Data Filters Preview |
| Hedging system is Disabled Previou | s Next |

Iceberg Options Solutions - http://manuals.playoptions.it/Iceberg_old/

In "Hedging Type" the user can choose the hedging typology: Continuos or Threshold.

- Continuos: This type of hedging starts neutralizing Delta immediately and it buy/sell the instrument to mantain delta-zero for every price fluctuation. The advantage is that delta will be always next to zero. The disadvantage is that a huge amount of operations will be needed to mantain delta next to zero so we will have high costs of transactions and spreads. Continuos Hedging is usually used when the profit target is the free risk rate.
- Threshold: This type of hedging starts neutralizing Delta when underlying price reach to a threshold which is a price established by the user.

Legs to Hedge

| Name | Threshold (ON Level) | Threshold (OFF Level) | | ng Type |
|--|-------------------------|--------------------------|--------|----------------|
| Put @ 12 2016-06-17 | 11.99 | 12.01 | Legst | o Hedge |
| Call @ 14 2016-06-17 | 14.01 | 13.99 | Thres | holds ON / OFF |
| | | | Assets | to Use |
| | | | Orders | туре |
| | | | Freque | ency |
| | | | Data F | ilters |
| | | | Previe | w |
| Thresholds: underlying price levels that activate or deactivate hedg | ing for each op | tion. | | • |
| Hedging system is Disabled | | Previo | bus | Next |

In the section "Legs to Hedge" you can choose the legs that you want to include in the calculation of the delta to protect.

Thresholds ON / OFF

| Name | Protect | Hedging Type |
|---|----------|---------------------|
| Put @ 11 2016-06-17 | | Legs to Hedge |
| Put @ 12 2016-06-17 | | Thresholds ON / OFF |
| Call @ 14 2016-06-17 | | Assets to Use |
| Cal @ 15 2016-06-17 | | Orders Type |
| | | Frequency |
| | | Data Filters |
| | | Preview |
| Select the legs you want to be hedged (one or more) | | • |
| Hedging system is Disabled | Previous | Next |

In the section "Hedging Type" is selected Threshold mode, in Thresholds ON / OFF you can set the thresholds, for every legs, in which the hedging will be enabled(ON Level) or disbled (OFF Level).

Assets to Use

| Name | Used to Hedge | Add Stock Add Underlying Future | Hedging Type |
|--|------------------|------------------------------------|---------------------|
| Eni SpA | | | Legs to Hedge |
| STOCK FUTURE Eni 17/06/2016 | | Add Other Future | Thresholds ON / OFF |
| | | Add ETF | Assets to Use |
| | | Add Option | Orders Type |
| | | | Frequency |
| | | | Data Filters |
| | | | Preview |
| Choose the assets that will be used to hedge the strateg | γ . | | - |
| Hedging system is Disabled | | Previous | Next |

In this section you can add the instrument (stocks, futures, options, ETF, etc.) to be used to neutralize delta.

Nota: If you use an ETF as an hedging instrument you need to set the "ETF ratio" of that ETF. You set this parameter in Symbol Manager. It denote the ratio between the underlying and the ETF. Take an example: The underlying is the dj Euro Stoxx 50 and it quote 2800 points, the ETF quote 28, the ETF ratio that you have to set is 100. This rule is valid for long ETF, whether the ETF is short you have to set a negative value.

Orders Type

| Hedge Order Direction | Contract Delta | Hedge Priority | Hedge Price Type | Hedge Use Smart Move | Hedge Smart Move Arnount | Hedge Move | Hedging Type |
|-------------------------------------|-------------------|-------------------|---------------------|-------------------------|-----------------------------|---------------|---------------------|
| Long & Short | 1.000 | Macro Adjustment | MARKET | | | | Legs to Hedge |
| Long & Short | 500.000 | Macro Adjustment | MARKET | | | | Thresholds ON / OFF |
| | | | | | | | Assets to Use |
| | | | | | | | Orders Type |
| | | | | | | | Frequency |
| | | 11 | _ | _ | | | Data Filters |
| | Preview | | | | | | |
| Smart Move: thi | | | | | | | |
| | | | | | | | |
| Hedging system is Disabled Previous | | | | | | | Next |

• Name: it displays the instrument used for delta hedging and its settings;

- Hedge Order Direction: the user can choose the direction of order used to hedge the delta: Long, Short e Long & Short. This think is useful when options are used to hedge ;
- Contract Delta: it represents the delta value expressed in euro of one contract;
- Hedge Priority: The user can choose between Macro Adjustment and Fine Adjustment. Depending on the choice made by the user in the system will give priority to instruments indicated by Macro Adjustment to neutralize much of the delta and then use the instrument marked with Fine Adjustment to refine the delta hedging. If multiple instruments is associated with the same priority (Macro Adjustment and Fine Adjustment) the system will balance the delta dividing it evenly among the instruments. The most common use is to use futures as Macro Adjustment and stocks as Fine Adjustment;
- Hedge Price Type: the user can choose the type of order to use between Market, Join, Improve, Split, Shave, Hit & Take, Hit & Take +. For the description of Orders Type, click qui;
- Hedge Use Smart Move: the Smart Move system allows the sending of an order and the automatic change pf the price if it is not executed;
- Hedge Smart Move Step (Ticks): it represents the price change between an order and the subsequent expressed in ticks. User needs to write the ticks quantity, conversion to currency or points be automatically carried out based on security ticks settings in Symbol Manager;
- Hedge Smart Move Interval (Secs): It represents the interval of time between an order and the next;
- Order Placement Mode: Here you choose how Iceberg must manage the delta hedging orders. Suggest Only: in this case the generation of an order in Iceberg is reported on the General tab, and the pending order is finalized in Real Market o Paper Trading. Paper Trading (Automatic): In this case the generation of an order it is automatically finalized Paper Trading. Real Market (Manual): in this case the generation of an order appears the book corresponding to sending the order in Real Market. Real Market (Automatic): In this case the generation of an order is automatically sent to the broker with the price of the type previously set. For any order, generation is conditioned to Date Filters.

Frequency

| | | | Mode Co | ntracts | | • | He | dging Type |
|-----------------------------|-------------------|-------------------|-------------------|-------------------|------------------|-----------------|----------|-------------------|
| Name | Hedge Min. Qty | Contract Delta | Contract Gamma | Contract Theta | Contract Vega | Contract Rho | De | lta Threshold |
| Eni SpA | 1 | € 1,00 | € 0,00 | € 0,00 | € 0,00 | € 0,00 | Le | gs to Hedge |
| STOCK FUTURE Eni 15/12/2017 | | € 500,00 | € 0,00 | € 0,00 | € 0,00 | € 0,00 | Th | resholds ON / OFF |
| | | | | | | | As | sets to Use |
| | | | | | | | Or | ders Type |
| | | | | | | | En | equency |
| | | | | | | | Da | ta Filters |
| | Delt | a 0 with tole | ance ± Not | | | | | |
| | Setup the he | dge frequen | cy to avoid us | seless or too o | lose correctio | ons. | | |
| Hedging system is Disabled | | | | | | | Previous | Next |

This section allows to set the control frequency of the strategy's delta, or the system will calculate delta. Four modality are disponible:

• Contracts: the system hedge the delta only after the specify number of contract definite in Hedge Min. Quantity is reached. It is possible to choose the minimum amount for every instrument ;

- Time Interval: the system checks whether is necessary hedge the delta every Time Interval (minutes);
- Time of Day: The system checks whether is necessary hedge the delta in a determined hour of the day ;
- Price Change: The system checks whether is necessary hedge the delta after a % underlying price change .

Data Filters

| Max Bid/Ask Spread (Options) 🔲 25 | Hedging Type |
|---|---------------------|
| | Legs to Hedge |
| Tick is not Zero | Thresholds ON / OFF |
| Max Tick Interval | Assets to Use |
| | Orders Type |
| Check Bld/Ask (Underlyings) NOTE: Last is always checked | Frequency |
| Check Last (Options) NOTE: Bid/Ask are always checked | requency |
| | Data Filters |
| Options presents different prices peculiarities, for example very high Bid/Ask spreads. You can select how to check for prices correctness and thus determine when to automatically calculate hedge orders. | Preview |
| | |
| Hedging system is Disabled Previous | Next |

There are available price filter in order to avoid problem with price exposed by the market maker .

- Max Bid/Ask Spread (Options): it verify that spread between bid and ask of the options in the strategy do not exceed a setted %;
- Tick is not Zero: It verify that last tick for every instrument of the strategy is not zero;
- Max. Tick Interval: it verify that time between a tick and the subsequent occurs within a certain time-range, for every strategy instrument;
- Check Bid/Ask (Underlyings):
- Check Last (Options):

As indicated a check on bid-ask option price price and on the last of the underlying is always effectuate in order to ensure the correct data flow between the broker and iceberg

Preview

| Name | Contract Delta | Hedge Order Direction | Hedge Priority | Hedge Min. Qty | Qty | Hedge Qty | Hedging Type |
|----------------------------|-------------------|--------------------------|-------------------|-------------------|-----|--------------|---------------------|
| Eni SpA | 1.000 | Long & Short | Macro Adjustment | 1 | | 66 | Legs to Hedge |
| STOCK FUTURE Eni 17/0 | 500.000 | Long & Short | Macro Adjustment | 1 | | 0 | Thresholds ON / OFF |
| | | | | | | | Assets to Use |
| | | | | | | | Orders Type |
| | | | | _ | - | | Frequency |
| Data Filters Results | | | | | | | Data Filters |
| No Errors | | | | | | | Preview |
| | | | | | | | |
| Hedging system is Disabled | | | | | | Previous | Next |

A preview of the instrumets used to hedge the delta and related quantity at market (Qty) and the quantity that should be used to neutralize the delta (Hedge Qty).

Charts

Iceberg records every hedging operation in order to premise the user to analize the settings and to optimize the hedging strategy.



Il menu - Charts

| ă 🌆 | | | | Option Put @ 9550 2016-06-17 - |
|-------------------|-------------------|----------------------|-----------------------------|--------------------------------|
| | | TimeFrame 1 Min 👻 | Leg Put @ 9550 2016-06-17 + | TimeFrame Daily - |
| Strategy Settings | Enable Hedging | | | Bars Count 500 - |
| Strategy | Hedging | Delta Strategy Chart | Hedge Chart | Thresholds Analysis Chart |

Strategy

| Strategy | Open the submenu strategy |
|---------------|---|
| New Strategy | It allows to create a new strategy |
| Open Strategy | It allows to open a strategy previusly saved |
| Save Strategy | It allows to save the strategy actually in use |
| Settings | Open the window Strategy Settings for the strategy settings |

Hedging



Delta Strategy Chart

Timeframe it is possible to choose the timeframe of the graph which represents the Delta

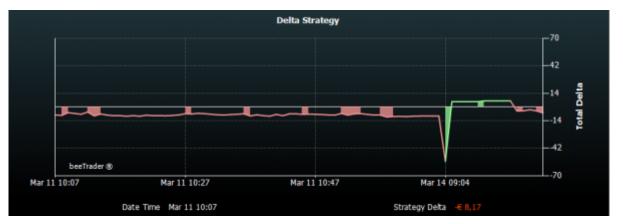
Hedge Chart

Leg It is possible to choose the instrument for delta hedging, see the graph with profit/loss and the number of contract of delta hedging

Thresholds Analysis

| Option | It is possible to choose which option of the strategy the threshold are showed on the underlying graph |
|---|--|
| Timeframe It is possible to choose which timeframe of the underlying graph the threshold are showed | |
| Bars Count | It is possible to choose how many bars are showed in the underlying graph |

Delta Strategy



In this graph is visualized the delta value of the hedging strategy since it was activated. From the menu you can choose the time frame of the graph.

Hedge Size



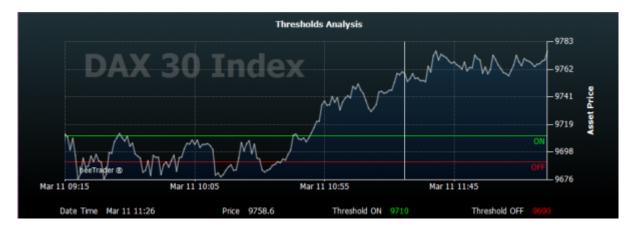
This graph shows the number of contracts used in every operations of hedging since hedging was activated. From the menu Hedge chart it is possible to choose, which instrument used to hedge is displayed .

Hedge In / Outcome



With reference to the chosen instrument in hedge Chart, in this graph are represented all profit / loss related to delta hedging operations.

Thresholds Analysis



In the graph is displayed Thresholds Analysis of the historical graph of the underlying (timeframe e bars count can be selected dal menù Thresholds Analysisi Chart) with the threshold set for the selected option in the menù Thresholds Analysis Chart.

This chart is very useful to analyze the position of the thresholds setted in relation to the number of times that have been touched.

Report

| Hedging Report : 2016-03-14 14.45.03 | DAX 30 Index |
|--|--------------|
| Strategy will end in: 95 days Total Realized with Hedging: € 1760,53 Total AtNow with Hedging: -€ 1253,03 Number of hedging trades: 87 Avg. Realized per trade: € 20,24 Max. Gain in single trade: € 237,61 Max. Loss in single trade: -€ 167,00 Avg. trades per day: 22.3 Max. Contracts per trade: 30 Min. Contracts per trade: 30 Min. Contracts per trade: 1 Avg. Strategy Delta: € 27,54 Max. Strategy Delta: -€ 55,38 Num. Times Threshold ON: 45 Num. Times Threshold OFF: 44 | Mund |

A useful report, accompanied by the underlying tick chart, it provides the user a clear view on the performance of its delta hedging settings.

