Strategy - Payoff

In this section it is possible to see the payoff and the graphs Relating to the strategy's greeks. The payoff shows the strategy at expire and at-now, so, you can see the risk graphically. On Iceberg you can see the payoff, the Greeks and the Forecast Map obtained by Defense Point Distribution together. All settings are accessible throught right click, it also allows to save or print the image.

Video Tutorial

4	24/03/2016	Charts - The work area	4:52	
4	24/03/2016	Charts - The Iceberg Payoff	3:20	
4	24/03/2016	Charts - the Greek and the Profit & Loss	4:57	
4	15/09/2016	Charts - Il Payoff atipico dei Calendar	7:49	
4	21/10/2016	Charts - Il Payoff dei Calendar 2	5:54	

Click here to watch other Iceberg Video

The menu

Å 🎝		Za	Q	6	\$
Strategy Settings	Template •	Reset Zoom & Pan	Crosshair	Save as Image	Print
Strategy			Charts		

Strategy

Strategy		opens the submenu Strategy
Å	New Strategy	it allows to create a new Strategy
Å	Open Strategy	it allows to open a previously saved Strategy
<u>Å</u>	Save Strategy	it allows to save the Strategy currently in use



Charts

Template	opens the Template submenu
Load Template	it allows to save the template of Payoff currently in use. The template is the configuration of the
Save Template	it allows to load previously saved templates and apply them to the currently Payoff
Save as Default	it allows to save the current template as default for sucessive 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 currently in use in image format (* .png). The image will be saved in "Pictures" subfolder of beeTrader folder, in the user's Documents
Print	it allows to print the Payoff of Strategy currently in use. The Feature is available on the PC in use if there is a printer connected

Charts Available

In addition to the PayOff chart, this section allows to see the vertical payoff chart and an histogram graphs of the profit / loss for every Greek. The graphs "Greeks (At Now)" monitors in real-time the trend of the Greek while the graph "Greeks (Realized)" shows the partition of profit / loss consolidated for each Greek, then the chart Greeks (History) shows the trend, since it was created, of the Strategy the profit / loss divided by Greek.



The menu with the right mouse button on the graphic Payoff

	- Settings: opens the window of Settings
Settings	- Save As Image: Allows to save the Payoff of the Strategy currently in use in
	image format (*.png). The image will be saved to the Pictures subfolder of
Save as Image	beeTrader's folder, in the user's My Documents
Print	- Print: allows you to print the Payoff of Strategy currently in use. The Feature
	is available on the PC in use if there is a printer

The settings window is divided into Settings and Colors

🔹 Charts Settings	_ ×	🔹 📔 Charts Settings 🛛 🗕 🗙
Settings Colors		Settings Colors
Common Settings		5 Background Top
Preferred Expiry 2017-09-15		Background Top Background Bottom
At Expiry		Chart Area Background Top
✓ At Now		Chart Area Background Bottom
✓ Break-Even Points		Foreground
✓ Standard Deviations 2,0	=	Bisabled
Periods 21	+	Grid Grid
Montecarlo Simulation		Zero Line
Underlying Excursion (days) 20	÷	Crosshair
Note: Standard Deviations provides a 1 day forecast Montecarlo provides at expiry forecast range.		
Payoff Settings		
Legs		
Paper Trading (At Expiry)		
Real Market (At Expiry)		
Calendar with Entry Volatility		
✓ Greek Delta		
DPD Forecast Map		
🗹 Info Bar		
Vertical Settings		
DPD Overlay		
		•
Default OK	Cancel	Default OK Cancel

In turn, the two main sections are divided into Common for common settings, Payoff for the settings of only Payoff, Vertical for the only Vertical settings, and eventually Greeks.

Settings \rightarrow Common:

- Preferred Expiry: when the strategy is on several maturities, allows you to choose which expires see on the payoff;
- At Expiry: shows the payoff of the strategy of all orders (Paper Trading and Real Market);
- At Now: Displays the At Now line;
- Break-Even Points: displays two vertical lines at the breakeven points of the strategy;
- Standard Deviations: displays two vertical lines to the number of standard deviations setted and calculated over the Periods selected below. For more information on Standard Deviations Click | here;
- Periods: number of periods for Standard Deviations calculation;
- Montecarlo Simulation: enables the display of two vertical lines representing the result of Montecarlo Simulation 4000 launches;
- Underlying Excursion: enables the display of two vertical lines representing the Highest High and Lowest Low of the underlying in the period indicated.

-1000 -1500

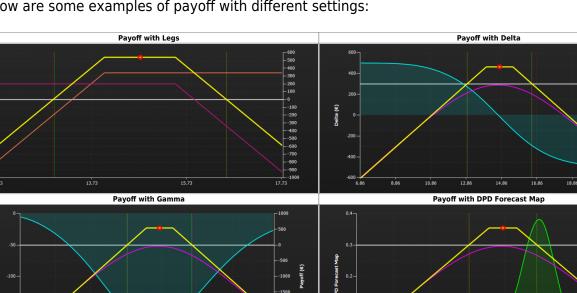
16.8

Settings \rightarrow Payoff:

- Legs: it allows to view every legs of the strategy, for better view it is recommended to disable the At Now line;
- Paper Trading (At Expiry): shows the payoff of the registered orders in Paper Trading;
- Real Market (At Expiry): shows the payoff of the registered orders in Real Market;
- Calendar witch entry volatility: it can be used in case of Calendar strategies, once activated the payoff is always calculated with the initial volatility, so variations in volatility does not change the payoff. (Warning: It is a forcing);
- Greek: display the Greek's graph of the user's choice;
- DPD Forecast Map: displays a predictive map on the price of the underlying at maturity calculated using the algorithm of the Defense Distribution Point. A detailed description is available at the DPD Forecast Map - Deepening, which is available on this page;
- Info Bar: Displays the lower bar with the main information of the strategy.

Settings \rightarrow Vertical:

DPD Overlay: it allows to draw the Defense Distribution Point on underlying historical chart.



Below are some examples of payoff with different settings:

Payoff - Deepening

The options are represented graphically by drawing in a Cartesian plane the prize value on the vertical axis (Y) and the values of the strike and the last price of the underlying on the horizontal axis (X).

Note : The value of the strike is highlighted at the point where the horizontal ray stops and starts the inclined ray.

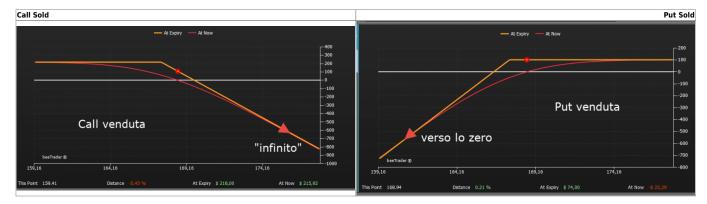
The inclined ray will be drawn towards zero when the option is a **Put sold**, while it will be drawn to infinity when the option is t purchased Put purchased Call , Call sold .

Here are two examples:

14.80

16.8

12.86



The Payoff is the representation at maturity. If the trader needs to see it in chart form at any time of life of the same, so even before the deadline, will instead refer to the curve shown in red.

This curve is called At Now (now), it is the real value of the option at that time.

This curve, over time will tend to get closer and closer to the Payoff because the time will erode the value of the contract.

The Payoff of Calendar's strategy

When we put in the strategy options with two different maturity the graph wille be curvilinear.



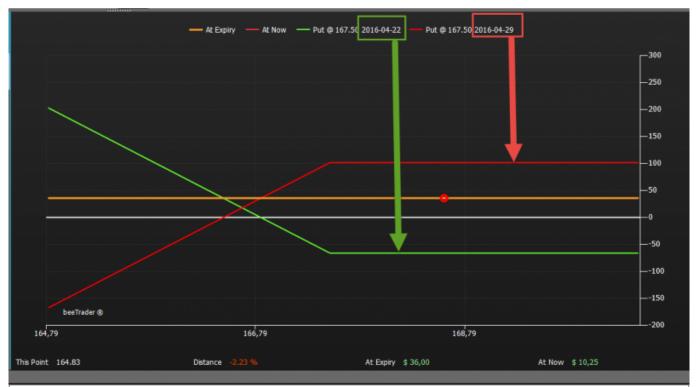
Let us ask ourselves this question: how can I draw the PayOff of two options assembled with an option that has a different maturity than other option?

In fact, when the first will expire his value will be the payoff while the second will be his at-now

So if we put in the graph the two options we will see that the longer maturity has a rounded shape.



If we want force the graph leading both options to the last expire it should become like the one in the following diagram: much more immediate to display **with the only fault: is unreal** because at maturity of the red option, the green one it is gone, having expired seven days before, as you can infer from the dates in legend.



So if you see a payoff with curved sections is certainly made up of options with different expiration dates

DPD Forecast Map - Deepening

The DPD Forecast Map is based on the Defense Distribution Point, the description is available at here, and provides a Gaussian probability of where the underlying price will be retained. It is and interpolation obtained from data of open option contracts, based on the expiration of the same, to their volatility at the time of negotiation and their delta.

The interpretation is simple and immediate: by maturity of the strategy that you are viewing appears DPD Forecast Map that at the highest visible point gives the value to which the price of the underlying is most likely to be rejected.



The Defense Distribution Point and DPD Forecast Map are not comparable in fact the DPD is a photo in real time while the forecast is a projection based on previous movements.

Time Horizon

The time horizon of the DPD Forecast Map is calculated on the shorter maturity of the options in the Strategy. In the case in which there are no options in the Strategy it is calculated at 10 days.

Standard Deviation - Deepening

It is the dispersion of the individual observations around the arithmetic mean, and it is used for evaluating the deviation from the so-called "equilibrium".

The standard deviation is denoted by the Greek letter "Sigma", it indicates how each value "go away" from the arithmetic mean of the values .

In statistics it is also called "square root of the variance" or "Standard Deviation". It is a statistical tool which show the dispersion of the data around the mean .

In Iceberg the standard deviation is calculated over a period of **21 days** trading days and then drawn in the values of the PayOff chart with two green vertical lines placed to a number of deviations equal to those set by the user. Default are represented at 2 Std. Dev.

What we want to see is the distance between the lines of Std. Dev. and the Last of the underlying in such a way as to have an area that has statistical probability of not being crossed at the moment of observation.

Probability equivalent to the standar deviation:

- 1 Std. Dev. is equivalent to 68%
- 2 Std. Dev. equivalent to 95%

N.B. Supposing that returns follow a gaussian distribution

