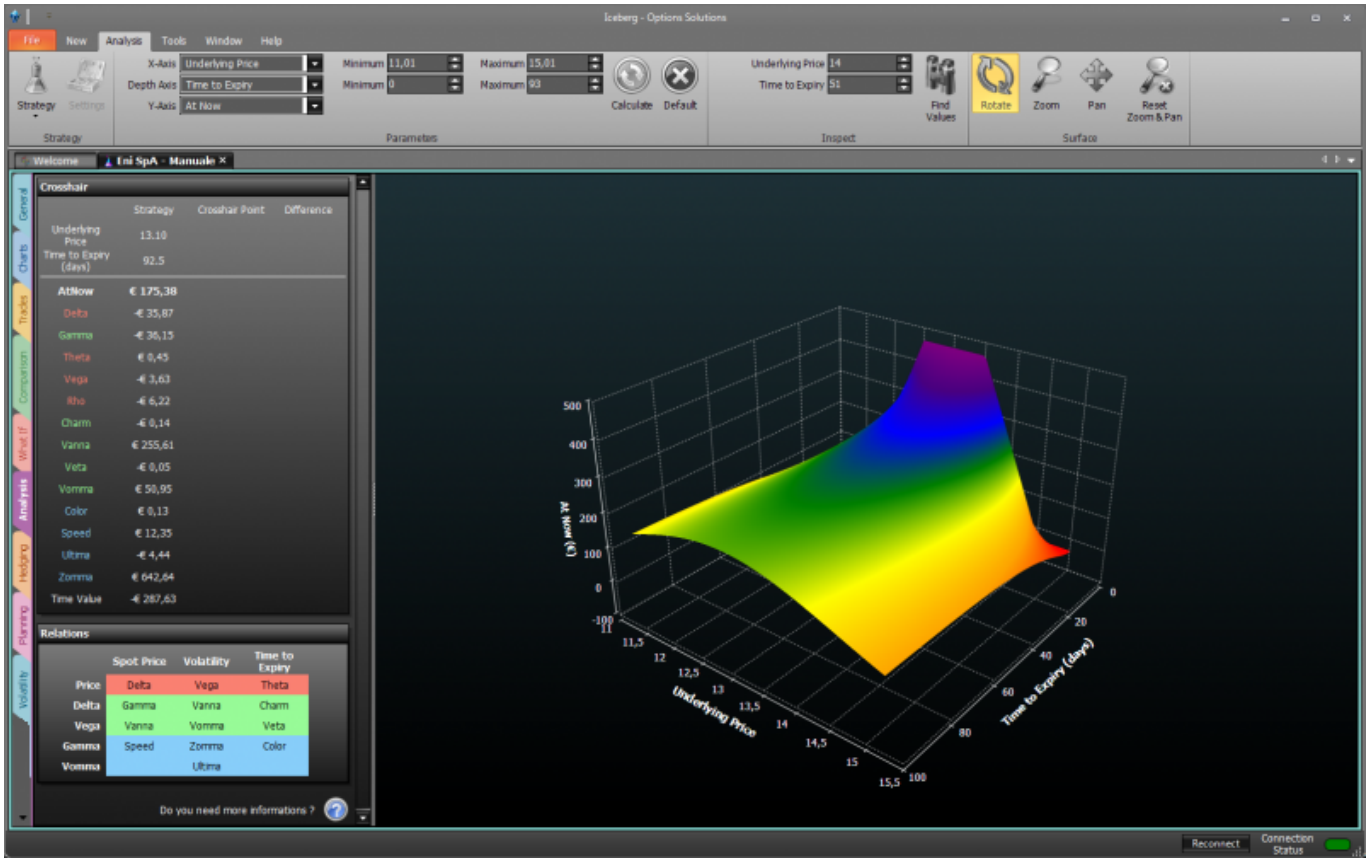
Strategy - Analysis

In this section it is possible to analyze the strategy through a graph 3D fully customizable. The graph shows the evolution of the same in function of the parameters set by the user. The user may choose to display the property in order to obtain the graphical representation that he like and at any point he can assess the value of the Greek and at-now strategy.

The Analysis function is an advanced version of Options Evaluator because it give a wide vision of the strategy with all its legs, while with Options Evaluator the user can analyze one option at a time



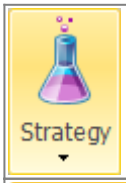
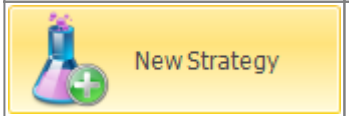
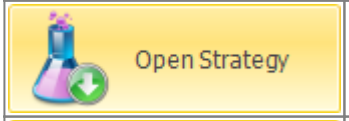
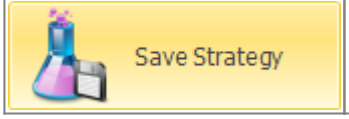
Video Tutorial

	15/09/2016	Analysis - Sapere quando fare la mossa!	20:26	

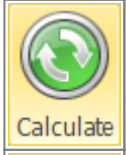
Click here to watch other Video di Iceberg

The menù

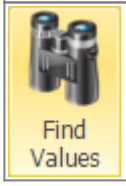
Strategy

	it open the submenu
	it create a new Strategy
	it allows to open a previously saved Strategy
	it allows to save the Strategy currently in use

Parameters

X-Axis	it allows to select the properties to display on the X axis, between Underlying Price, Time to Expiry, Volatility, Risk-Free Rate
Depth Axis	it allows to choose the properties to display on the Depth axis, between Underlying Price, Time to Expiry, Volatility, Risk-Free Rate
Y-Axis	it allows to choose the Greeks or the Options price to display on the Y axis. Greeks: Delta, Gamma, Theta, Vega, Rho, Vanna, Charm, Speed, Zomma, Color, Veta, Vomma, Ultima, Time Value
Minimum	it allows to choose the minimum value of the X axis or depth, depending on the chosen property
Maximum	it allows to choose the maximum value of the X axis or depth, depending on the chosen property
	it makes a new calculation and then a new drawing if the parameters have been changed
	it loads the default parameters

Inspect

Underlying Price / Time to Expiry / Volatility Change / Risk-Free Rate Change	allows to set a value to look for in Crosshair panel
Underlying Price / Time to Expiry / Volatility Change / Risk-Free Rate Change	allows to set a value to look for in Crosshair panel
	if enabled looks up for greeks values at the point specified in previous fields. While this button is enabled values in Crosshair panel remains freezed. Click again this button to unlock and enable normal crosshair

Surface

 Rotate	once activated by pressing and holding the left mouse button you can rotate the surface by moving the mouse
 Zoom	once activated by pressing and holding the left mouse button you can zoom into the surface by moving the mouse
 Pan	once activated by pressing and holding the left mouse button you can move the surface by moving the mouse
 Reset Zoom & Pan	it reset all the graphical changes and return to the initial view

Crosshair

Crosshair

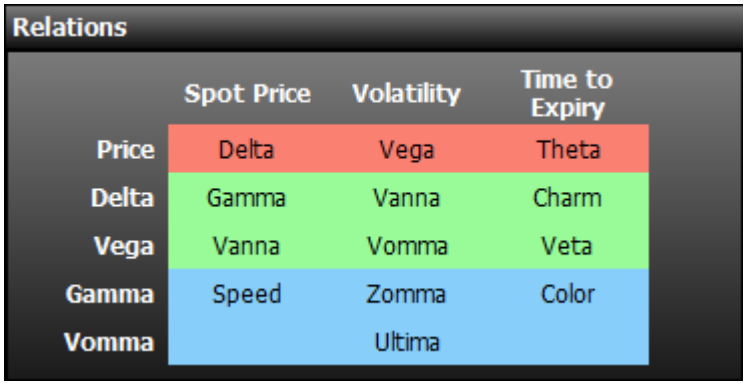
Measure	Strategy	Crosshair Point	Difference
Underlying Price	13.41	13.31	-0.10
Time to Expiry (days)	109.5	56.47	-53.06
AtNow	**€ 176,88**	**€ 240,91**	**€ 64,03**
Delta	-€ 60,03	-€ 69,57	-€ 9,54
Gamma	-€ 34,29	-€ 86,95	-€ 52,66
Theta	€ 0,32	€ 0,95	€ 0,62
Vega	-€ 3,72	-€ 5,03	-€ 1,31
Rho	-€ 7,76	-€ 4,85	€ 2,91
Charm	-€ 0,27	-€ 0,54	-€ 0,27
Vanna	€ 468,06	€ 492,68	€ 24,63
Veta	-€ 0,04	-€ 0,10	-€ 0,06
Vomma	€ 57,14	€ 72,34	€ 15,20
Color	€ 0,10	€ 0,47	€ 0,37
Speed	€ 19,54	€ 24,99	€ 5,45
Ultima	-€ 6,15	-€ 5,24	€ 0,92
Zomma	€ 654,97	€ 1.655,63	€ 1.000,66
Time Value	-€ 286,12	-€ 222,09	€ 64,03

It shows the greeks value and the at-now. The first column indicates the starting values of the

strategy. The second column shows the corresponding values to the point where the mouse pointer. The third column shows the difference between the previous.

The greeks are divided by color according to their order of derivation. first derivative (orange), second derivate (green) e terza (light blue).

Relations



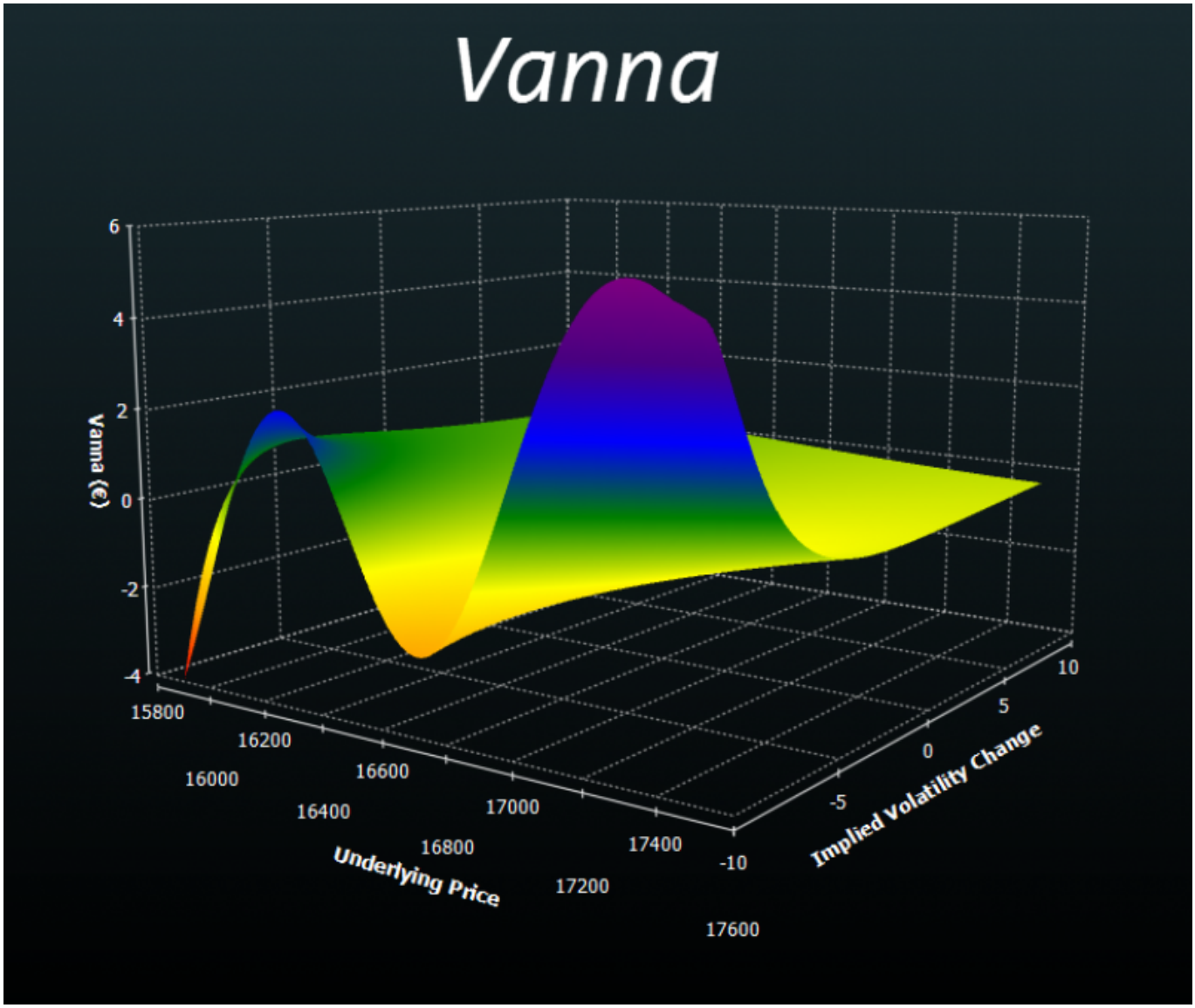
The greeks are linked together according to the relationships expressed in the table Relations. Example: the Speed measures the rate of change in Gamma with respect to changes in the underlying price.

The greeks are divided by color according to their order of derivation: first derivative (orange), second derivate (green) and third (light blue).

Example

Here the user can read a little extract from a thread of Playoptions forum in order to have an idea of the utility of higher order greeks.

Vanna - the power of the higher order greek



Vanna is the sensitivity of the option delta with respect to change in volatility; or alternatively, the partial of vega with respect to the underlying instrument's price.

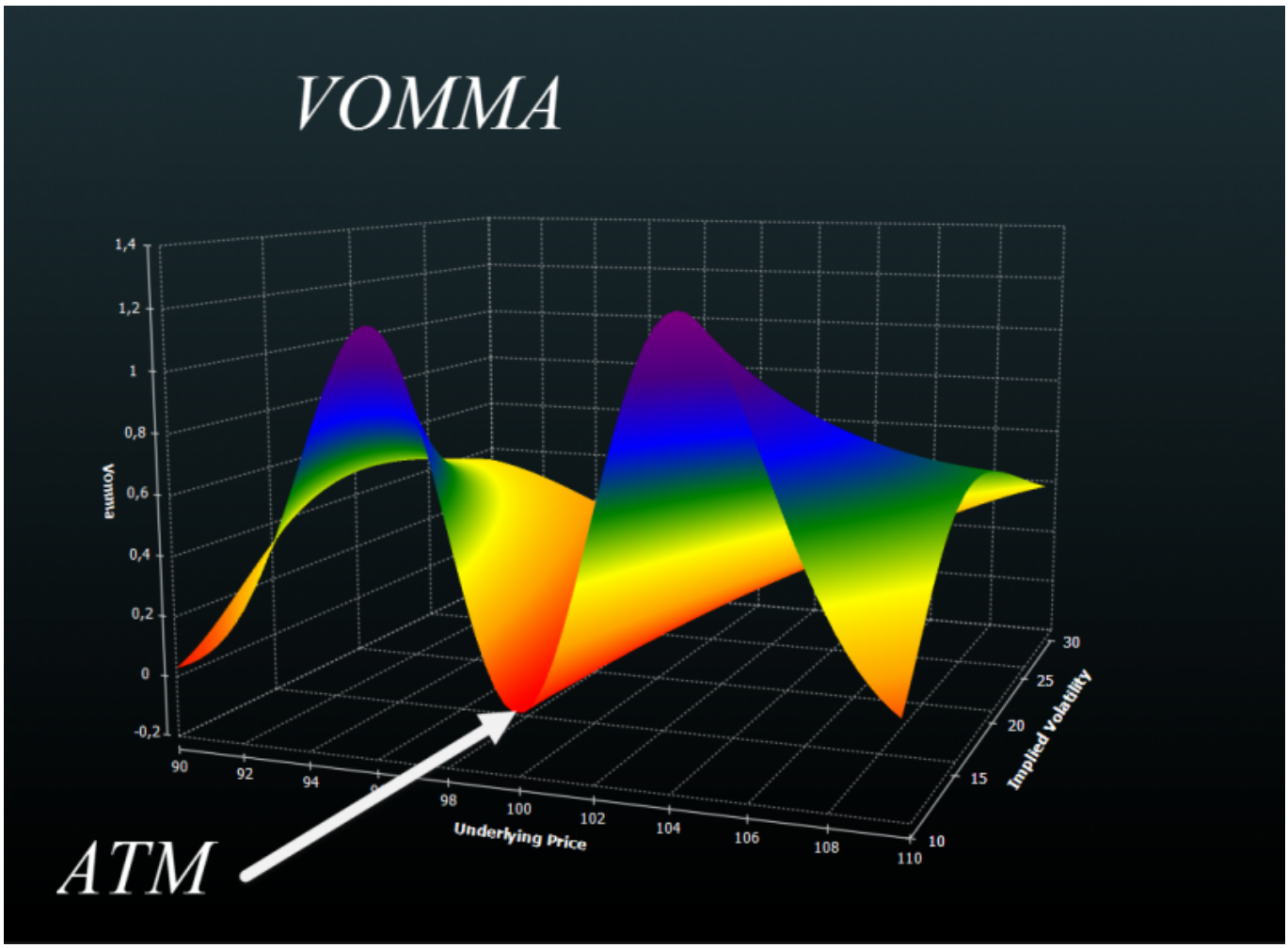
It has a positive value for Call options and a negative one for the Put. By increasing the implied volatility, the chance for the options to go ITM increase. This is like to have an higher Delta (in absolute value).
A Trader would think of hedge strategy just looking at the delta, but also if he looked the Vanna would the missing information, how much the delta to a change in volatility? In fact, if volatility increases, the delta increases and consequently increases the amount of the underlying to use to neutralize the event of the right and increases the value Vanna.

But if he watch the Vanna what would change?

Suppose you have a type Reversal Strategy, long Call e Short Put and suppose that happen two simultaneous events: the price falls and the volatility increases.
This case would cause more damage on Put side beacause you will have an increase of the implied volatility and thus the delta.
In practice the position Vanna positive is becoming more exposed in a market which is falling.
So the bearish risk grow due to the implied volatility and spot price.

This shows that in cases of multiple events the greater the risk is measured by the greek Vanna.

The importance of Vomma

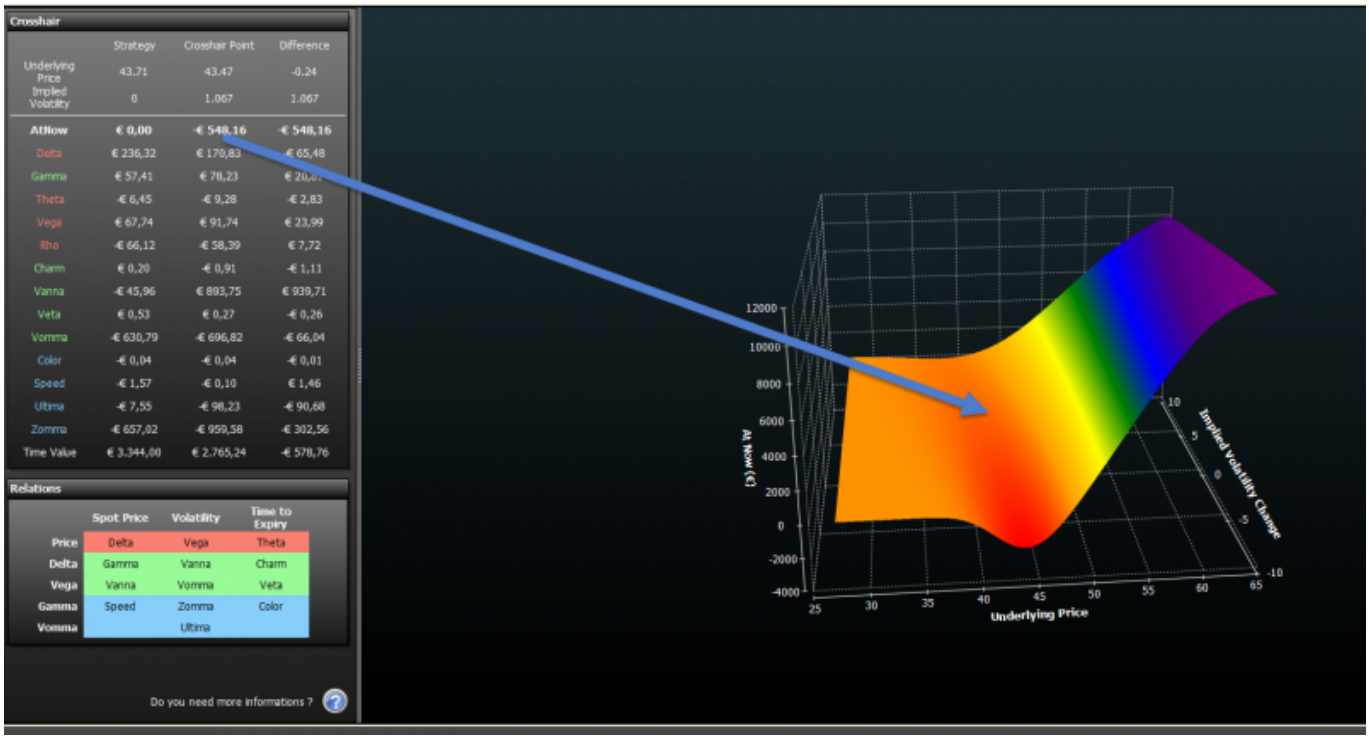


Gamma measures the rate of change in the delta with respect to changes in the underlying price while Vomma measures the rate of change to vega as volatility changes.
It is very important for Calendar or other volatility strategy.
When the trader watch the vega he knows that when the volatility will vary of 1 point the value of the strategy will change of the amount of Vega.

Approximately!

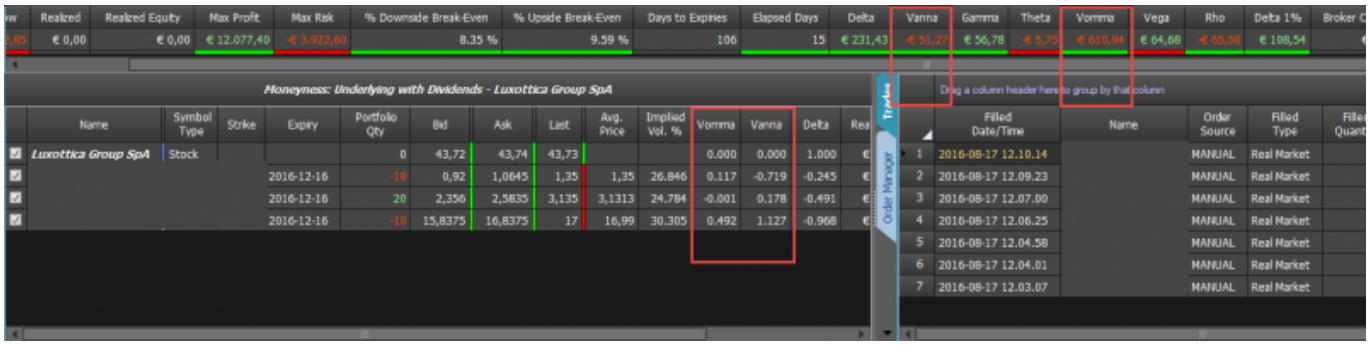
Because Vega, similar to a snowball rolling on more snow, change its size!! It can become unexpectedly large or small.
So we measure the variation of Vega by watching value of Vomma.

the figure shows that it is practically irrelevant in the ATM options but becomes important in the wing, symmetrically.



The Vomma grows when the volatility falls so if you have a “long Vega” strategy a decrease of volatility will have an higher impact than shown by the Vega!

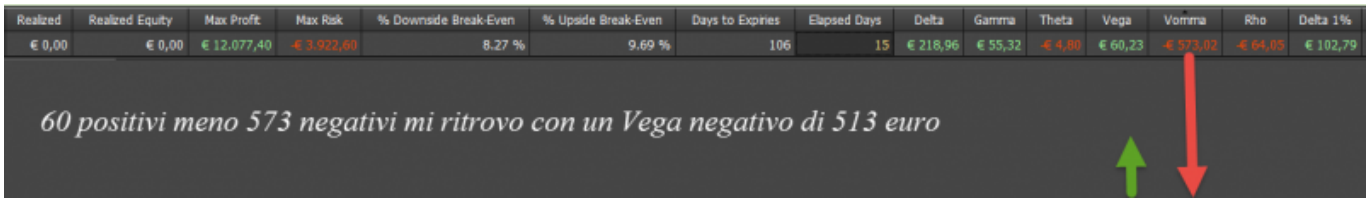
You can find this values by clicking right in Strategy, in the columns of the individual option values, strategy or portfolio. The analysis with the respective graphs can be found in Option Evaluator or in the window Analysis.



Look here what happens zooming-in the image above of real strategy:

The strategy is Vega positive!

But it isn't true! It is negative by 10 times.



And it is also visible in the chart of At-now.
