SamoaSky

OptionsOracle

Quick Start Guide version 1.41

1. Overview

This guide is designed to help you get started using OptionsOracle, selecting the stock, building strategies and examining the performance of the strategies.

OptionsOracle main window is divided into three areas –

1. **Stock Quote and Options-Chain Data**. The stock-quote and options-chain section allows you to select the under-test stock symbol/name and download the stock quote and options-chain data.

   The options-chain table view can be filtered using the following filters:

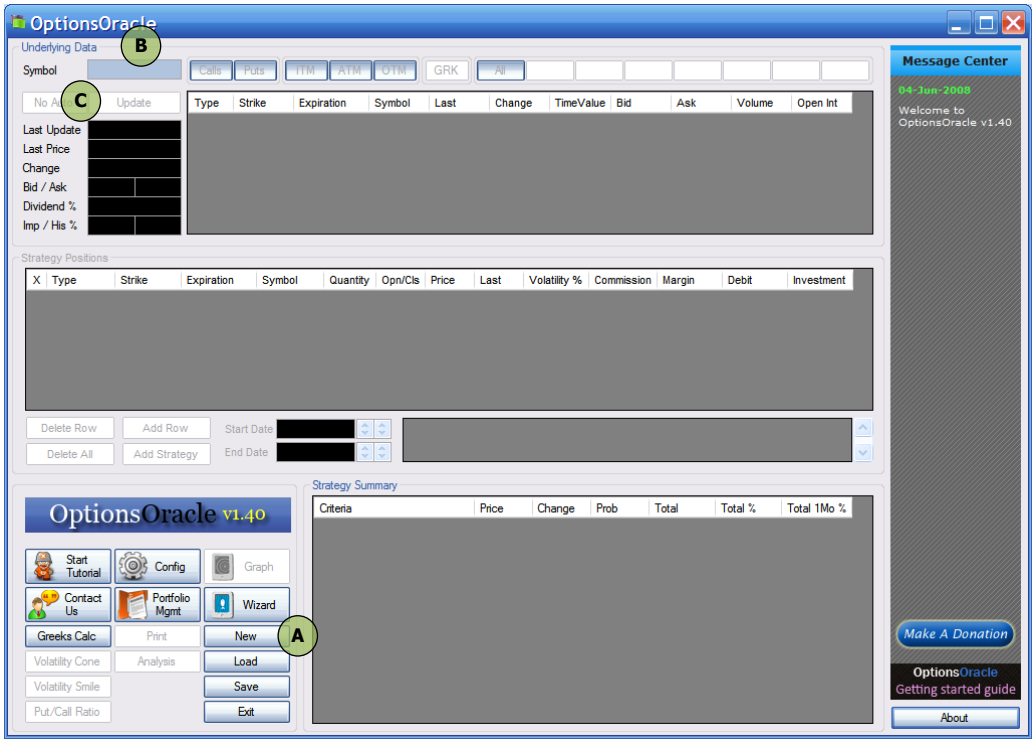
   - Type: **Call** and **Put**.
   - Money Status: **ITM** (in-the-money), **OTM** (out-of-the-money) and **ATM** (at-the-money, which covers options with strike price at distance of ±1% from current stock price).
   - Expiration Date.

2. **Investment Strategy under Test**. The investment strategy section gives you the ability to build your under-test strategy by adding options and stock positions. From this section you can also control the strategy start-date (by default today) and the end-date (by default the closest expiration date).

3. **Summary of Strategy Performance Result**. The strategy performance summary section provides information about the strategy performance given future stock prices at the specified end-date.

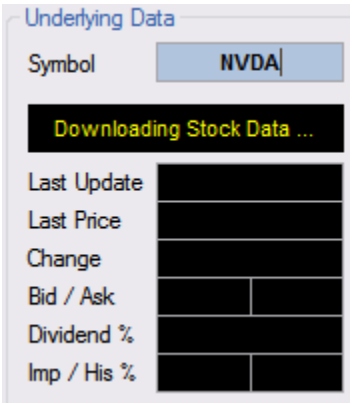
2. Building and Testing Strategy

Step 1 – Starting New



A. Click the **New** button to start a new strategy test.

B. Enter the underlying or name into the **Symbol** text-box. (For index symbol add "^" prefix).

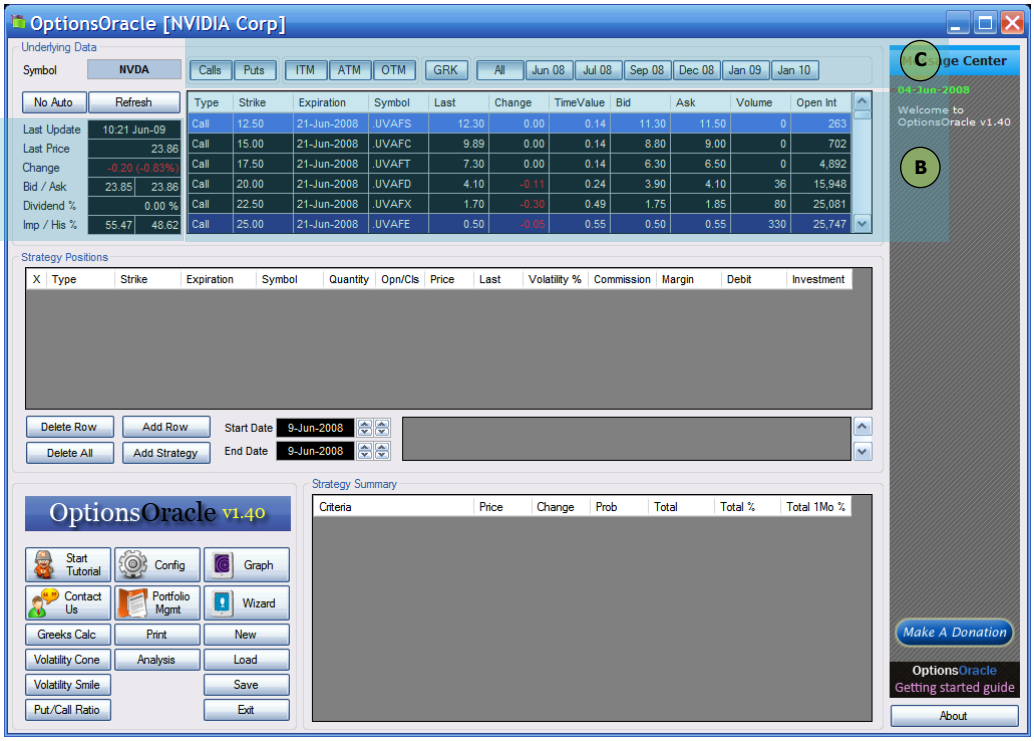


C. Click **Update** to download the stock-quote and options-chain from the online servers. After you click the Update button a "Downloading Stock Data…" message will appear. While this message appears OptionsOracle downloads the latest stock-quote and options-chain data.

   Note that although usually the download process takes ~15 seconds, on some servers the download process can take up to 2 minutes.

Step 2 – Review the Stock Data

After the download operation is completed. The latest stock quote and options-chain data will appear in the upper section of the window.



A. The stock quote (**A**) shows the latest quote stock with the following fields –

- Last Update: Last time the quote was updated.
- Last Price: Stock latest price.
- Change: Daily change in stock-price in value (and percentage).
- Bid / Ask: Stock current bid / ask prices.

NEW in 1.4

- Dividend %: Annual Dividend Rate in percentage.
- Imp / His %: Implied and historical volatility in percentage.

Implied volatility is calculated as the weighted average implied volatility of all the stock's options.

Historical volatility is available only on the US dynamic servers, and should be enabled from the configuration window prior to download in order to appear.

NEW in 1.4

You can manually adjust the Last Price, Implied volatility, Historical Volatility and Dividend Rate, by clicking the specific text-box, and entering the new value.

B. The options chain data (**B**) shows the latest options information (by default all available options will appear in table) with the following fields –

- Type: Options type (either "Call" or "Put").
- Strike: Strike price.
- Expiration: Expiration date.
- Symbol: Stock exchange symbol for the option-contract.
- Last: Last price the option was sold.
- Change: Last change in option price.
- Bid / Ask: Options bid / ask prices.
- TimeValue: Time value of options (this field is calculated based on the latest stock price and the current option bid / ask prices).
- Volume: Daily volume of option (in number of contacts).
- OpenInt: Number of currently open contacts.

When **GRK** is selected, the options Greek information will also appear –

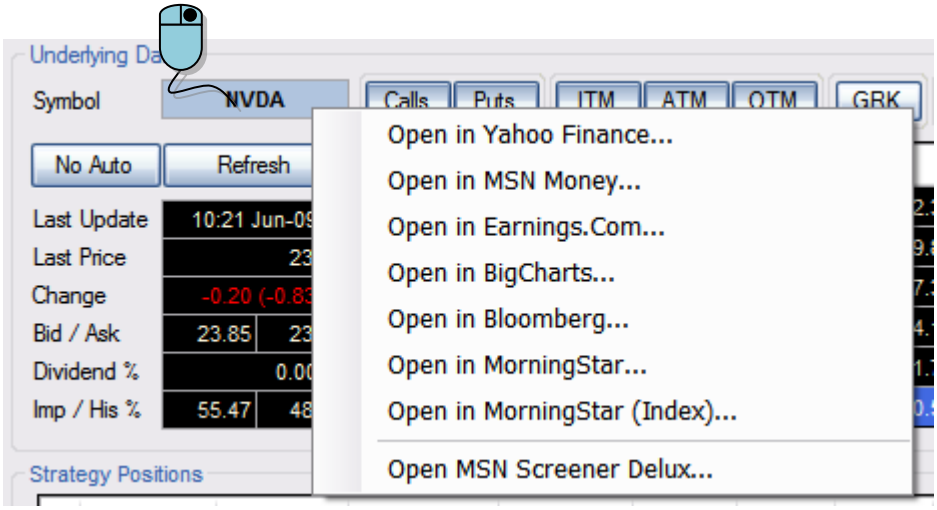
- ImpV: Option Implied Volatility.
- ITM Prob: The probability that the options will be in-the-money at the expiration date (base on current stock-price and ImpV).
- Delta: Delta represents by how much the option price changes relative to a movement of the stock price by 1.
- Gamma: Gamma represents by how much the Delta changes relative to a movement of the stock price by 1.
- Theta: Theta represents by how the option price changes relative to time change of one day.
- Vega: Vega represents by how much the option price changes relative to movement of volatility by 1 %.

C. The filters section (**C**) provides the ability to customize the options view by selecting the option type, the option "the-money" status, and the expiration months.

After the stock-data is downloaded for the first time the **Update** button changes to **Refresh** button. Click the **Refresh** button at any time to refresh the quote information.

To enable automatic periodic refresh of the stock data click the **No Auto** button. The periodic refresh will happen every period, specified from the configuration window. Click this button again to stop the automatic refresh.

TIP: You can open the stock web-page at Yahoo / MSN by bringing the mouse over the stock name, Clicking the right button, and selecting the specific quick-link from the drop menu.



NEW in 1.4

The quick-link menu can be fully customized to show your preferred links, from the configuration dialog.

Step 3 – Strategy Table

OptionsOracle provides you the ability to select a strategy from the pre-configured templates, or build your own strategy by setting up all the positions that constructs it.

What is a "Position"?

> *A position is a single transaction that includes selling (short) or buying (long) an asset (stock, call-option contract or put-option contract).*
>
> *Examples -*
>
> *a. Long Stock Position: Buy 100 stocks NVDA (Nividia Corp).*
> *b. Short Call Position: Sell 1 call contract of Nividia 30.00 @ Jan-2009*

What is "Strategy"?

> *A strategy is a combination of one or more positions. For example, by combining the two above positions a Covered-Call strategy is established.*

The strategy setup section in OptionsOracle is located at the middle of the main window. This section has four areas –

A. The Strategy Table. The strategy table lists all the positions that constructs the strategy for each position the following information is shown:

- Type: Position type (short/long stock/call/put).
- Strike: Strike price of the call/put option position. This field is not available for stock positions.
- Expiration: Expiration date of the call/put option position. This field is not available for stock positions.
- Symbol: Stock exchange symbol for the stock/option-contract.
- Quantity: For stock positions this field shows the number of stocks. For call/put option positions this fields shows the number of contracts (in the US each contact is usually one hundred options).

NEW in 1.4

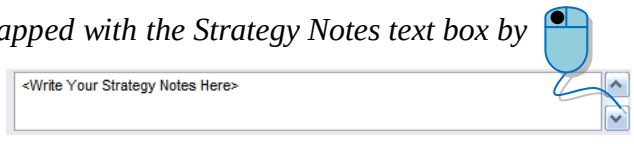
- Opn/Cls: Position was executed to Open a new position or to Close and existing position.
- Price: For stock positions this field is the price of the stock (by default the last stock price). For options positions this field is the price of one option in the contract (by default the ask/bid option price depends if the position is long/short).

- Volatility %: The volatility that is used to calculate the call/put option time decay (by default the weighted implied volatility of the stock is used). This field is not available for stock positions.
- Commission: Commission that you need to pay to open or close this position.
- Margin: Margin required for this position (the margin is calculated based on the margin rules specified from the configuration window). Note that the margin of the position also depends on other position, since covered positions usually requires different margin from naked positions.
- Debit: [Read-Only] Debit. The total debit required for this position. For short positions this value is negative and represents the credit received by the position.
- Investment: [Read-Only] Investment. The total cash investment (including collateral) required from your side (debit) for this position. For long positions the investment is equal to the margin. For short positions the investment is the margin plus the market value (proceeds).

B. Position Info Table. The position info table shows additional information on the selected position in the strategy table (click position to select it). For options position the info table shows the option Greeks:

- Interest: Interest paid for this position for the duration of the strategy.
- ImVolatility: Option implied volatility.
- Delta: Delta represents by how much the option price changes relative to a movement of the stock price by 1.
- Gamma: Gamma represents by how much the Delta changes relative to a movement of the stock price by 1.
- Theta: Theta represents by how the option price changes relative to time change of one day.
- Vega: Vega represents by how much the option price changes relative to movement of volatility by 1 %.

TIP: The Position Info Table can be swapped with the Strategy Notes text box by clicking the scroll on the right –



C. End/Start Date. Specify the strategy start and end dates. By default the start-date is today, and the end-date is the closest expiration date in your strategy.

Step 4 – Build a Strategy

BUILD YOUR OWN STRATEGY

The easiest way to add stock/options position to the strategy table is by dragging-and-dropping the stock-symbol or the specific option from the options-table to the strategy-table.

*TIP: by default when you drag-and-drop position, a long position will be added to the strategy table. If you want to add short positions hold the **Shift** key while you do the drag-and-drop.*

How do I "drag-and-drop"? To drag-and-drop an object move the mouse over the dragged object, Click the left-button, move the mouse to the dropped area (while keeping left-button Clicked!), release the mouse button.

Let's build a covered call strategy -

A. Add a long-stock position to the strategy table, by moving the mouse on the stock symbol (**A**), dragging it to the strategy table, and dropping it.

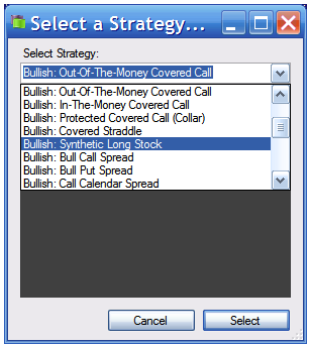
B. Select a call option from the options-table (**B**), and drag-and-drop it to the strategy table. Hold the **Shift** key while you drag-and-drop.

By now, your strategy table should look something like –

SELECT FROM PRE-CONFIGURED STRATEGIES

Alternatively to building your strategy from scratch by adding positions you can build a strategy using the pre-configured strategy templates.

To add strategy using the templates click the **Add Strategy** button, located below the strategy table. The template selection window will appear –



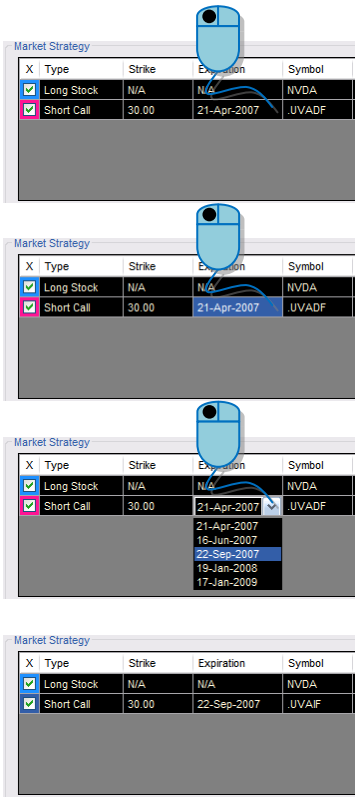
Select one of the strategies from the list and Click **Select** button. The strategy will appear in the strategy table.
After you selected the strategy you will need to modify the positions to use the specific options you want to use.

Step 5 – Modify your Strategy

After you selected a position (or used the strategy template to select on automatically) you can modify each position fields. In general, you can modify each field with black background (all except "Debit" and "Investment").

MODIFY POSITION TYPE, STRIKE, EXPIRATION OR SYMBOL

The position type-fields can be modified to other fields from the available options chain and stock data. To change a field (let say the expiration follow the following steps -



A. Move the mouse over the cell and click the left mouse. Cell will be highlighted.

B. Click the left mouse button again to go into edit-mode. Combo box drop-down will appear in cell.

C. Click the combo-box drop-down to open combo-box. Select new field. Combo-box will be closed.

MODIFY POSITION QUANTITY

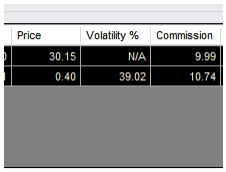
The position quantity can be modified to any integer value. To change the quantity simple, click the cell one time to select it, click it again to get into edit mode, and enter your quantity.

TIP: To increase the quantity by "100" for stock positions and by "1" for options position you can simple double-click the quantity cell. Try It.

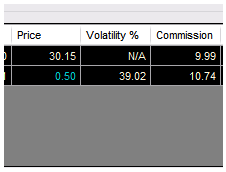
MODIFY POSITION PRICE, COMMISSION OR VOLATILITY

The position price, commission and volatility, are usually set automatically by OptionsOracle based on the latest stock quote/option-chain data, and your configuration (configured from the config-window). However, OptionsOracle provides you the ability to change these fields manually.

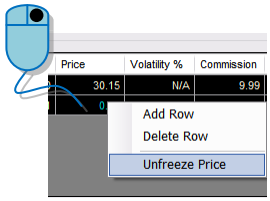
Once you change one of these fields its status changes to FREEZE. This means that OptionsOracle will not modify this field automatically, and even if for example to refresh the quote the price will not be changed. When the field is in freeze state it colored blue.



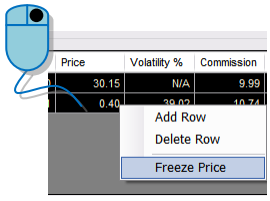
A. Price field is not frozen.



B. After the price was manually changed to "0.50" its state changed to frozen, and its colored blue.



C. To unfreeze a frozen cell, click the right button mouse and from the drop-down menu select "Unfreeze …"



D. To freeze a cell without changing the value, click the right button mouse and select "Freeze …"

MODIFY POSITION MARGIN

Margin can be set manually to overwrite OptionsOracle automatic margin calculation. However when you set margin manually OptionsOracle will not use the frozen margin position in its calculation for other positions margin.

Step 6 – Examine your Strategy Performance

Strategy investment summery and performance indexes are displayed in the summery table located at the lower right of the main window (**A**).

CRITERIA IN STRATEGY SUMMERY TABLE

In the summery table you can see the following information -

- **Total Investment:** The total cash investment (including collateral) required from your side to open this strategy.
- **Total Debit:** The total debit of this position – this is the total cash required/receive for this position w/o margin considerations.
- **Interest Paid:** Interest paid by you to your broker for borrowed money in margin positions.
- **Max Profit Potential:** Maximum profit potential in this strategy at the end-date (given any possible movement of the stock price).
- **Max Loss Risk:** Maximum loss risk in this strategy at the end-date (given any possible movement of the stock price).
- **Lower / Upper** Lower/Upper protection appears only if the strategy has

Protection:	positive profit with the current stock price, and shows the lower/upper stock price in which the strategy breaks-even at the end-date.
• Lower / Upper Breakeven:	Lower/Upper protection appears only if the strategy has negative profit with the current stock price, and shows the lower/upper stock price in which the strategy breaks-even at the end-date.
• Return if Unchanged:	Strategy profit at the end-date if the stock price does not change.
• Return if Strikes @ ##.##	Strategy profit at the end-date if the stock price reaches the strike price ##.##
• Expected Return	Expected Return (Expected-Return) shows the Expected Return for stock-price. This value is calculated by the integral on the probability of the stock (given the volatility) to reach a price X multiply by the return of the strategy at price X, for every possible X. - This value can be used as an index to compare strategies, and determine which strategy has higher probability of resulting with profit (the higher the expected-return the better).
• Return At Target	Return At Target shows the strategy return at the specified stock target-price. The target-price can be modified from the result table in similar way to how parameters are set in the strategy-table.
• Current Return	Current-return shows the strategy return if you choose to close all the positions at the current time given the latest stock/options data download. This parameter is good to show the current profit/loss of your strategy given the latest market prices.
• Total Delta	Total Delta represents by how much the strategy return changes relative to a movement of the stock price by 1.
• Total Gamma	Total Gamma represents by how much the Total Delta changes relative to a movement of the stock price by 1.
• Total Theta [day]	Total Theta represents by how the strategy return changes relative to time change of one day.
• Total Vega [% Volatility]	Total Vega represents by how much the strategy return changes relative to movement of volatility by 1 %.

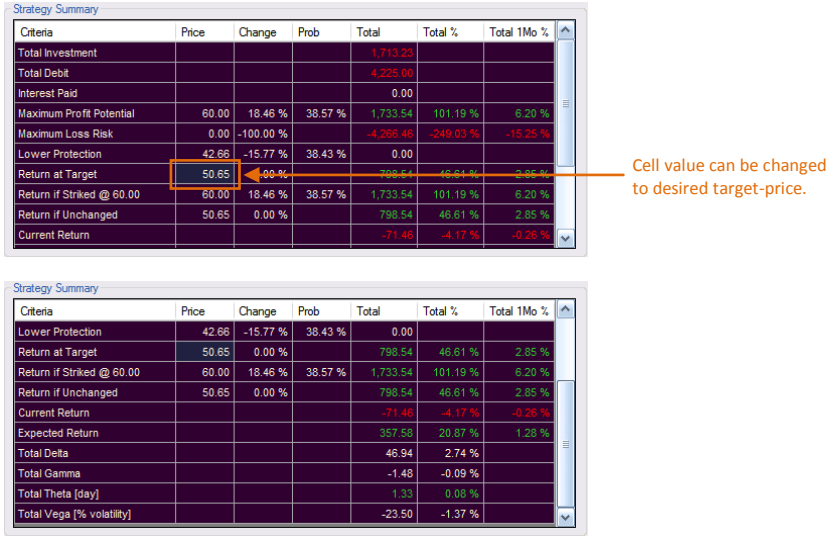
Note: The Expected-Return and Total-Greeks criteria do not appear in the default view. To add the criteria to the view, you need to change the strategy summery view configuration from the config-window.

TIP: In theory if all the implied volatilities are the same as the stock volatility the expected return should be zero. However since in real market options are not priced the same, the expected return can be used as a good indicator to compare different strategies of the same stock (the higher the expected-return the better). Comparing expected-return between different stocks is usually meaningless.

PER-CRITERIA INFORMATION

For each criteria the following parameters are provided -

- Price: Stock price relevant to the criteria.
- Change: Change in stock price relevant to the criteria.
- Prob: Probability of the stock to cross the specific stock-price by the end-date.
- Total: Total value (investment, interest, return or Greek)
- Total %: Total return in % relative to total net investment.
- Total 1Mo %: Total return in % calibrated to one month return.



CHANGING YOUR DEFAULT SUMMERY VIEW

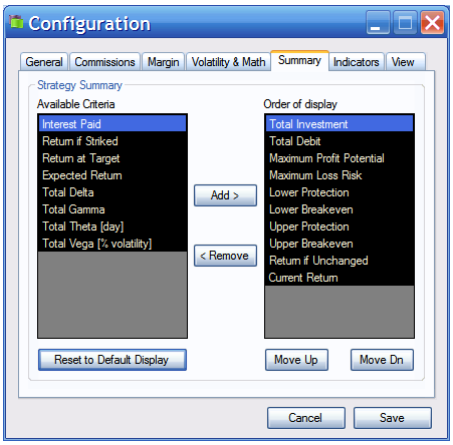
By default some of the criteria are not visible in the strategy summery table. You can modify the view (add/remove criteria and change the order of the criteria) using the summery control from the configuration window.

A. Click the **Config** button on the main-window to open the configuration window.

B. Select **Strategy** from tabs.

C. Select **Expected-Return** from the available criteria and click the **Add** button.

D. Click **Save**.



Step 7 – View the Strategy Performance Graph

Another very useful way to check your strategy performance as function of stock-price, end-date and volatility is using the graph feature of OptionsOracle.

Click the **Graph** button to open the graph window –

By default when the graph window is open the total strategy performance by stock-price graph appears in light-blue (**A**), and the light-blue rectangle, marks the current stock price.

In addition to the graph itself, the vertical dotted red line indicates the position of the marker. By moving the mouse over the graph the marker will follow the mouse location. You can also saw in detailed the marker actual position on the bottom of the graph (**B**). The information provided in this line includes the stock-price, relative change of stock-price, the return and return in % of investment, and the probability of the stock to cross this point (log probability, given the stock volatility).

The **Auto-Scale** button located at (**C**) provides the ability to reset the scale of the graph back to default at any point.

You can show the -2StdDev, -1StdDev, +1StdDev, and +2StdDev vertical markers by clicking the **Show StdDev** button located at (**D**).

If you would like to see the graphs of all the positions that construct the strategy click the **Show-Positions** button (**E**) to change its state to **Hide-Positions**. Try It -

The mode selection (**F**) allows you to change the graph mode between the following –

A. Profit/Loss vs. Stock-Price. In this mode you will be able to change the strategy volatility (**G**) and end-date (**H**) to specific values, and check the return as function of stock-price.

B. Profit/Loss vs. Volatility. In this mode you will be able the change the stock-price (**G**) and end-date (**H**) to specific values, and check the return as function of stock-volatility.

C. Profit/Loss vs. End-Date. In this mode you will be able the change the volatility (**G**) and stock-price (**H**) to specific values, and check the return as function of end-date.

ZOOM IN/OUT

Before you zoom in/out you must select the graph control by clicking anywhere on the black area of the graph.

After you clicked on the graph press the **Page-Up** key to zoom-out, or **Page-Dn** key to zoom-in. To zoom in into a specific rectangle area, move the mouse to the upper left

corner, click the mouse left-button, move the mouse to the lower right corner (while keeping the mouse button pressed) and release the mouse button.

MOVE GRAPH UP/DOWN/LEFT/RIGHT

Before you move the graph you must select the graph control by clicking anywhere on the black area of the graph.

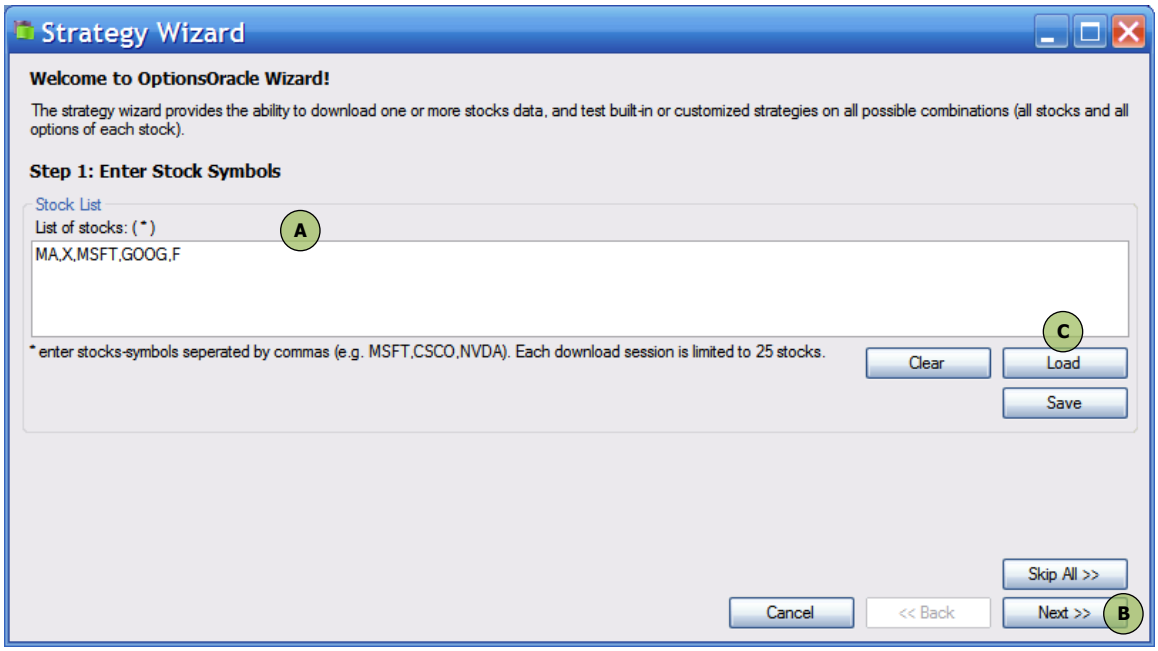
After you clicked on the graph press the **Arrow** keys to move the graph up, down and to the sides. To move the graph using the mouse click the mouse middle-button, move the mouse (while keeping the mouse button pressed) and release the mouse button.

3. Optimizing Strategy Using the Wizard

OptionsOracle wizard is an options screener tool that provides the ability to evaluate a build-in or customized strategy using all possible options combinations from list of stocks. At the end the wizard generates a list of potential trading options with their result criteria.

Step 1 – Select Stocks List

To open OptionsOracle wizard press the **Wizard** button on the main-window. The wizard window will be opened.



The first set in using the wizard is specifying the list of stock-symbols that you which you test. You can either enter the list of stocks manually, or load it from a file. OptionsOracle support two text file formats: comma-separated list or line-by-line list

Note: You can enter as many stocks-symbol as you want, however in order to avoid excessive downloading of stock-data from the public servers, each download session is limited to 25 stocks.

A. Enter the stock symbols into the **Stock List** text-box (**A**).

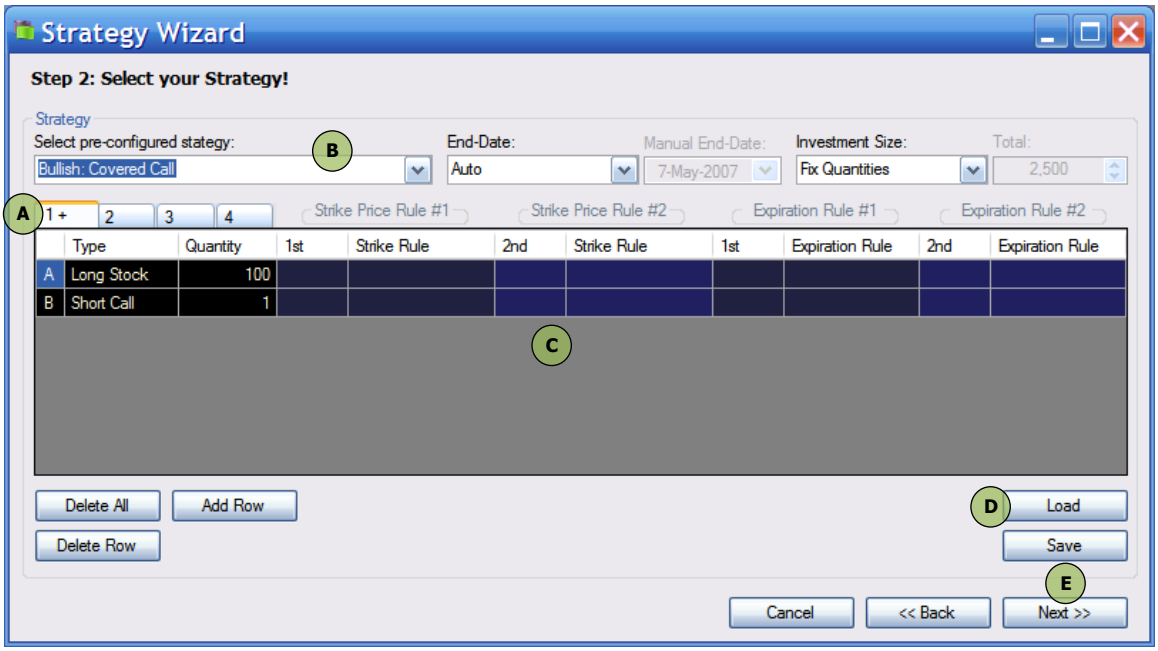
B. Click **Next** to continue (**B**).

Step 2 – Select/Build Strategy

OptionsOracle wizard provide the capability to compare up to two different strategies at the same time. Use the tabs (**A**) to navigate between the four strategies. A + sign next to the tab id indicates that this is an active strategy.

After you have selected a list of stocks to scan, you need to specify the strategies that you would like to test. You can either select a strategy from a pre-configured strategy (**B**), or build your own strategy by adding entries to the strategy-rule table (**C**).

If you choose to build your own strategy or modify a pre-configured strategy you can save (**C**) the strategy rules, so you will be able to load them next time. You can also specify a name to your strategy by entering it into the strategy selection box (**B**).



In addition to the strategy rules you can also specify two additional parameters –

- End-Date: Select "Auto" to let the wizard automatically assigns end-date for each strategy under-test (the first expiration-date). If you would like to overwrite the wizard selection you can specify an absolute date ("Manual") or expiration-date of other position in the strategy (rather the first one).

- Investment-Size: Select "Fix Total" to instruct the wizard to automatically adapt the strategy quantities to bring the total investment to a fixed value. This option is recommended when you

want to compare strategies from different stocks.

Select "Fix Quantities" to instruct the wizard to keep the quantities specified in the strategy as they are.

To Continue -

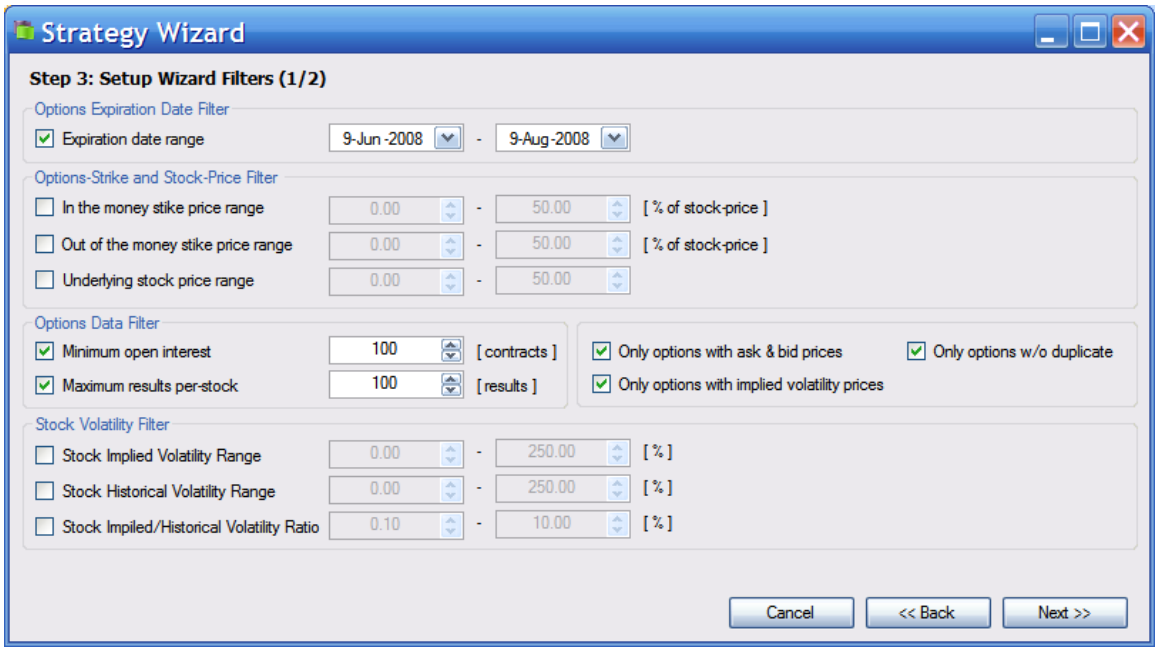
A. Select a "Ratio Covered Call" strategy from the **Pre-Configured Strategy** combo-box.

B. Select **Investment-Size** to "Fix Total" and Total of 2500.

C. Click **Next** button to continue (**E**).

Step 3 – Setup Options Selection Filters

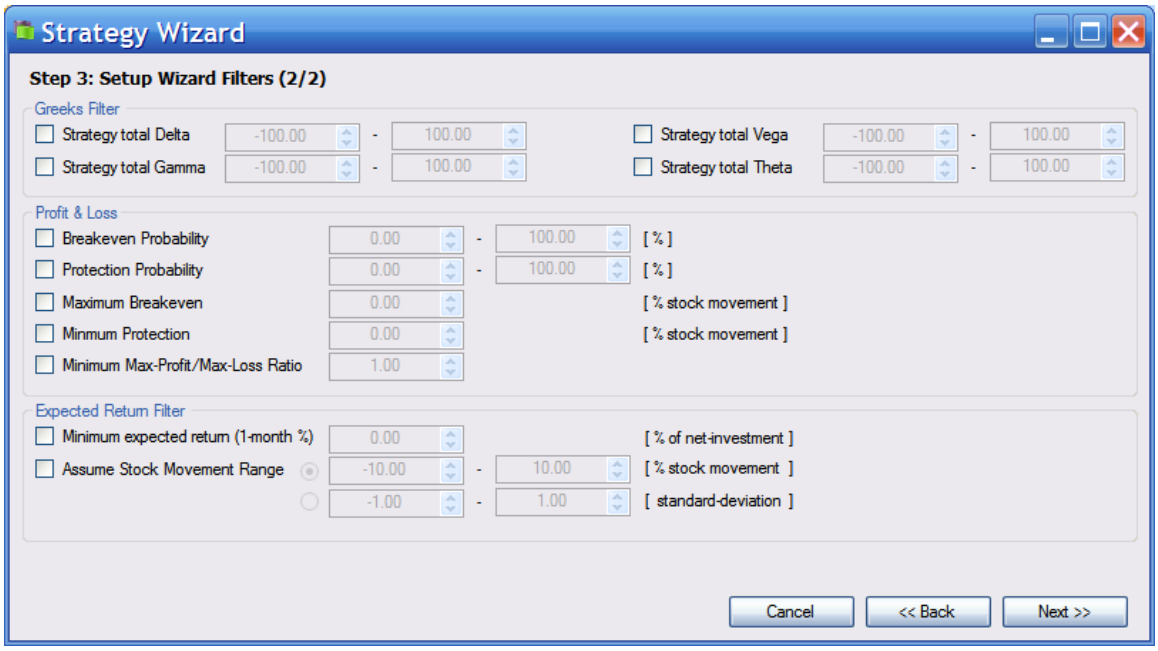
After you have selected the strategy that you would like to test, you can specify filters to narrow the search to more specific options / stocks.



The wizard provides the following filters –

- Expiration date range: Instructs the wizard to check only options with expiration-date within the specified range.
- ITM strike price range: Instructs the wizard to check only options with ITM strike prices within the specified range. Use range 0-to-0 to filter-out ITM options. Note the usage of this filter does not filters-out OTM options.

- OTM strike price range: Instructs the wizard to check only options with OTM strike prices within the specified range. Use range 0-to-0 to filter-out ITM options. Note the usage of this filter does not filters-out OTM options.
- Minimum Open Interest: Instructs the wizard to check only options with minimum open interest as specified.
- Maximum Results Per-Stock: Instructs the wizard to limit the number of results per-stock.
- Only Options with Ask/Bid Prices. Instructs the wizard to use only options that have a valid ask/bid prices.
- Only Options w/o duplicate. Instructs the wizard to use only options that do not have a duplicate option with different symbol (this settings is useful to filter-out special options).
- Only Options with implied volatility. Instructs the wizard to use only options with valid implied volatility (this setting is useful to filter-out invalid options data).
- Stock Implied Volatility: Instructs the wizard to check only options from stock with average implied volatility within range.
- Stock Historical Volatility: Instructs the wizard to check only options from stock with historical volatility within range.
- Stock IV/HV Ratio: Instructs the wizard to check only options from stock with implied-volatility to historical-volatility within range.

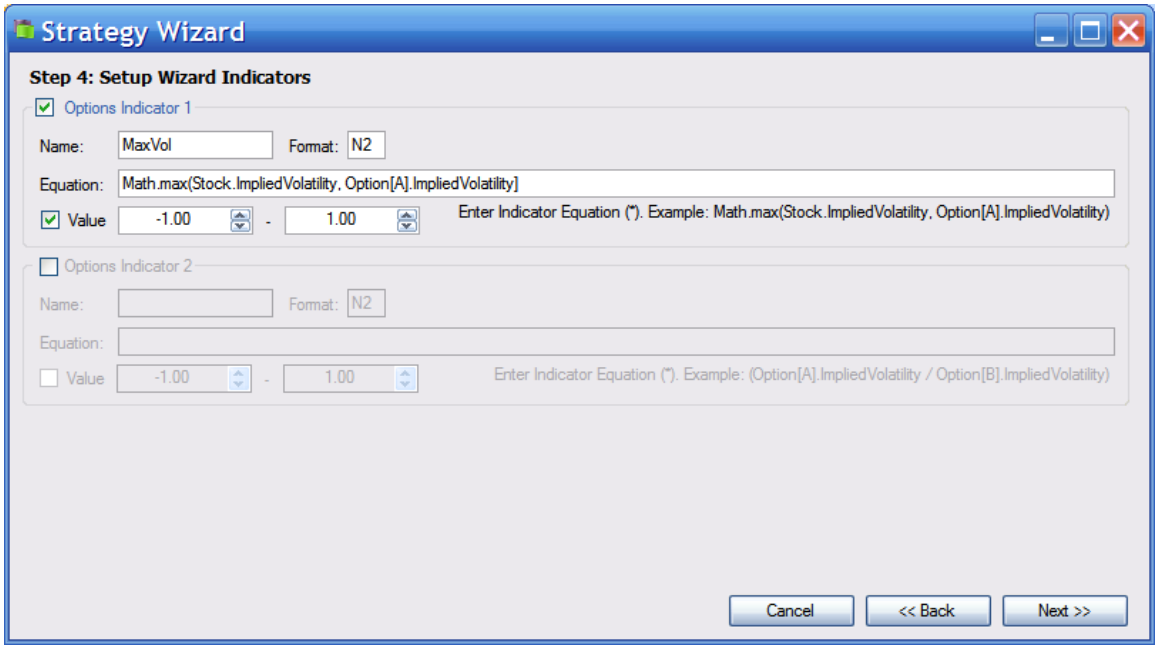


- Total Delta: Instructs the wizard to show only results with the specified delta range.
- Total Gamma: Instructs the wizard to show only results with the specified gamma range.
- Total Theta: Instructs the wizard to show only results with the specified theta range.
- Total Vega: Instructs the wizard to show only results with the specified vega range.
- Breakeven Probability: Instructs the wizard to show only results with the specified breakeven range (this filter does not affect results with positive return-if-unchanged).
- Protection Probability: Instructs the wizard to show only results with the specified protection range (this filter does not affect results with negative return-if-unchanged).
- Minimum Max-Profit/Max-Loss Ratio: Instructs the wizard to show only results with minimum max-profit to max-loss ratio.
- Minimum Expected Return: Instructs the wizard to show only results with minimum expected 1-month return percentage.
- Stock Movement Assumption: Instruct the wizard to calculate the expected-return given the specified stock movement range in either percentage or StdDev units.

NEW in 1.4

Step 4 – Setup Wizard Indicators

In addition to the above filters, OptionsOracle provides the ability to setup customized up to two indicators that are calculated based on customized functions. In addition a filter can be set to narrow the search on specific results of the indicators.

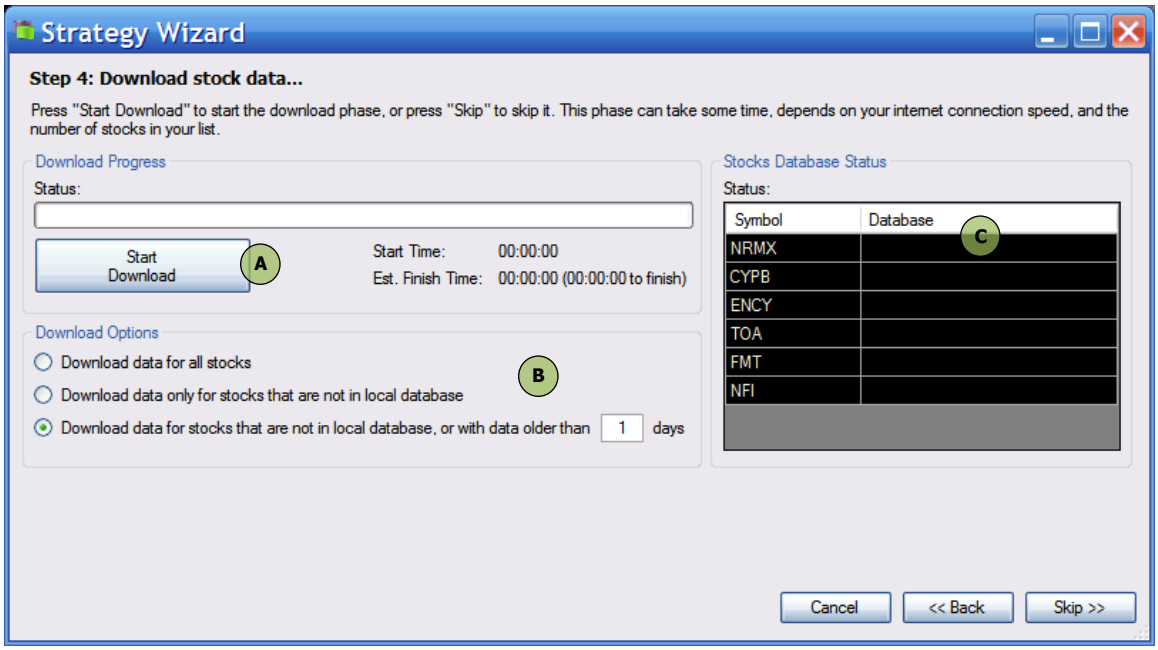


More information about how to setup the indicators equations is available on section 10 (Setup Customized Indicators).

After you have setup the wizard indicators click the **Next** button to continue to the download window.

Step 5 – Download Stock Data

The next step in using the wizard is downloading-the-stocks data. During this step the Wizard will download stocks data (last quote and options-chain) and will save it the local database (so you can run additional tests on the stocks-list without re-downloading their data).



This window is simple. On the right side (**C**) you will see a list of all the stocks you specified, with their database status.

Before starting the download you need to select the download methods (**C**). There are three possible methods –

1. Download data for all stock – download all stocks data even if the stock-data is currently available in the local database.

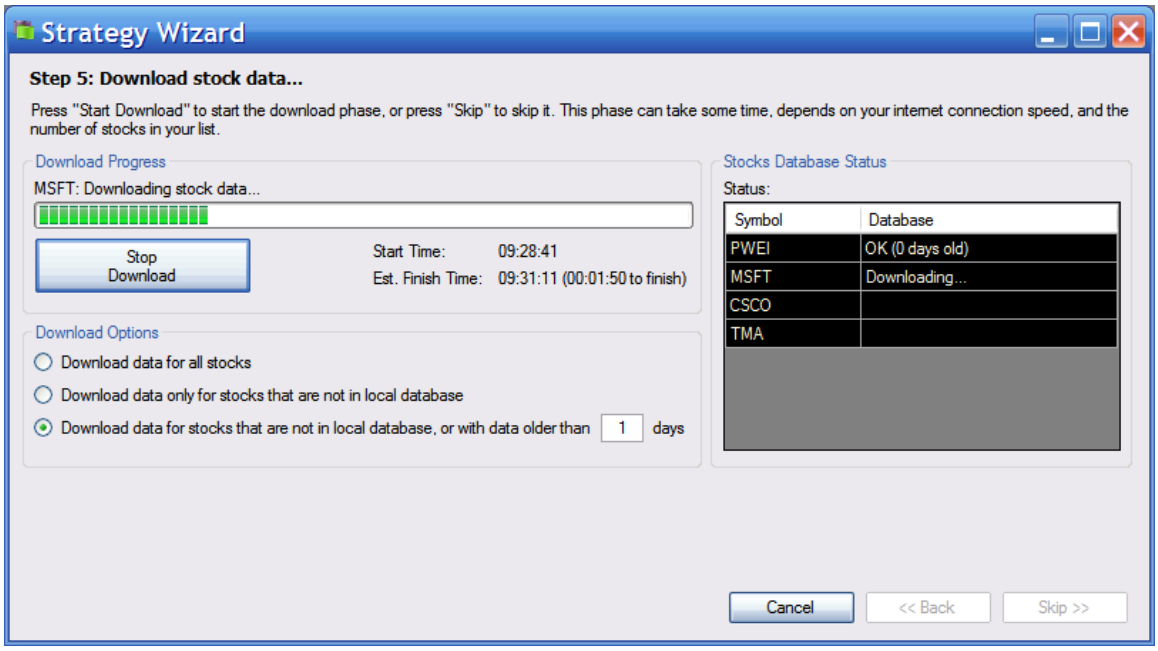
2. Download data only for stocks that are not in database – download all stocks that are not currently in database (no matter how old is the stock data in the local database).

3. Download data from stocks that are not in database or with data older than XX days – download all stocks which were not updated in the last XX days.

Note: Each download session is limited to 25 stocks (why there is a limit? because the servers are public, and downloading hundreds of stocks data in very short period of time may classify your computer IP address as an offending IP address).

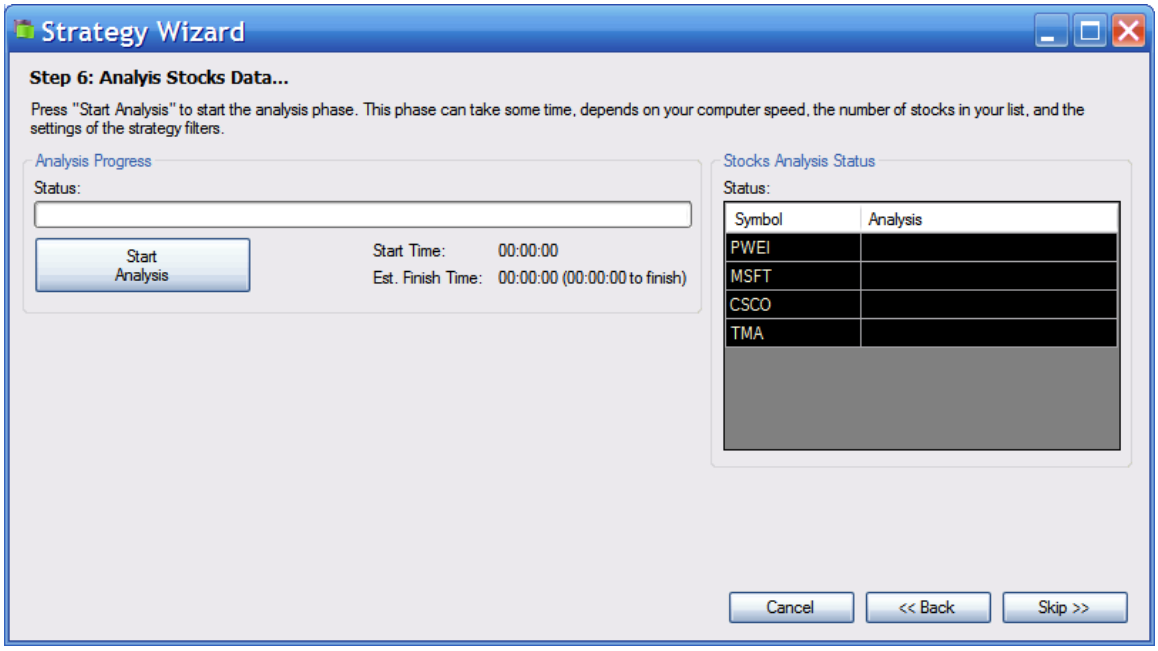
Due to the limit if you would like to check for example 50 stocks you will have to select the third download-method click download to download the first 25 stocks, and when it finishes click again on download to download the other 25 stocks.

To continue click the **Start-Download** button -

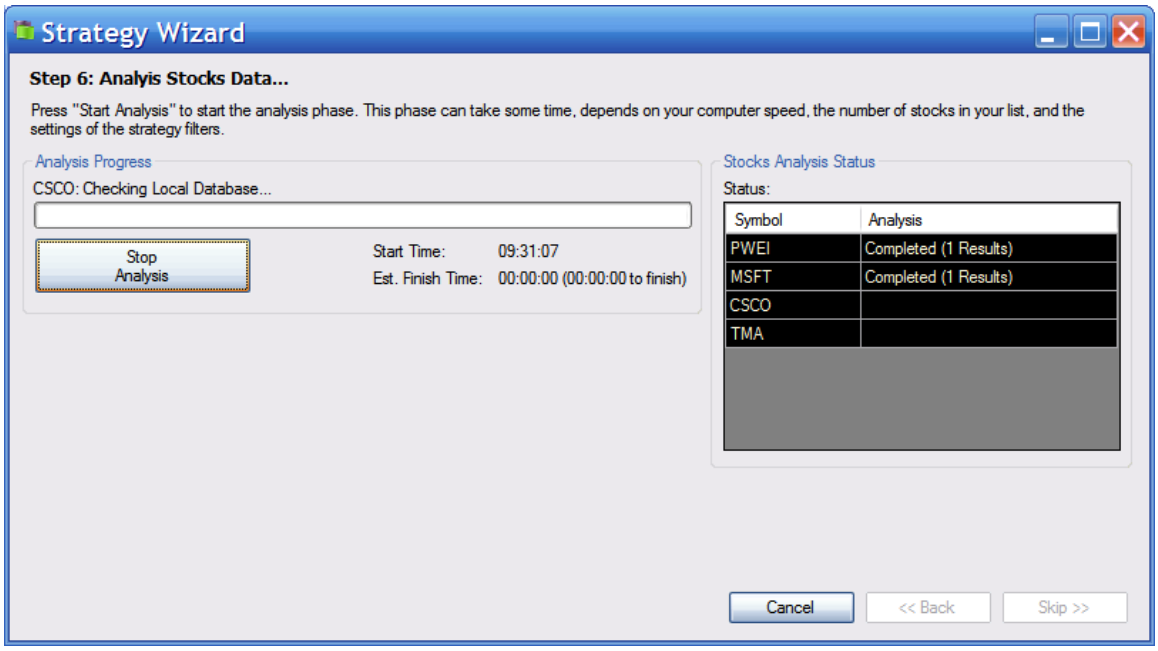


Step 6 – Analysis Stocks Data

At this step the wizard will process the stocks-data and try to find the best combinations. After the processing is completed the wizard will show all the possible combinations with positive possible-profit (i.e. strategies that are all-loss will be filtered out).



To continue click the **Start-Analysis** button -



Step 7 – Review Results

When the analysis process is completed the wizard will automatically move to the results window.

In the result window you will see a table of all the strategies (**A**) that were tested and produce a positive potential profit (i.e., Max-Profit-Potential > 0) -

The strategies table includes the criteria summery columns which are similar to the ones that appear in the summery table (main window). You can sort the table by clicking on the column header you wish to use as sort index.

To check a strategy positions (what are the positions that consists this strategy) select the strategy by clicking on its row (it will be highlighted), and view the strategy details on the text-box located below the table (**B**).

To close the wizard and move a selected strategy to the main window, select the strategy, and click the **To-Strategy-Table** (**D**) button.

4. Volatility Cone

The volatility cone is a tool that provides the ability to analyze the historical volatility of an option compared to its actual implied volatility for similar time periods.

Note: The volatility cone is not supported by all non-US options-stock exchanges.

Click the **Volatility-Cone** button to open the volatility-cone window –

Upon opening the volatility cone will automatically download the stock historical data, and present the results with two separate graphs: historical prices graph, and volatility graph.

The Stock historical prices (**A**) graph shows the stock daily open-close-low-high prices during the last two years. This is a simple graph that is self explanatory.

The Stock volatility (**B**) graph shows the historical volatility calculated for different time periods, and the implied volatility of all the options, positioned relative to their time to expiration.

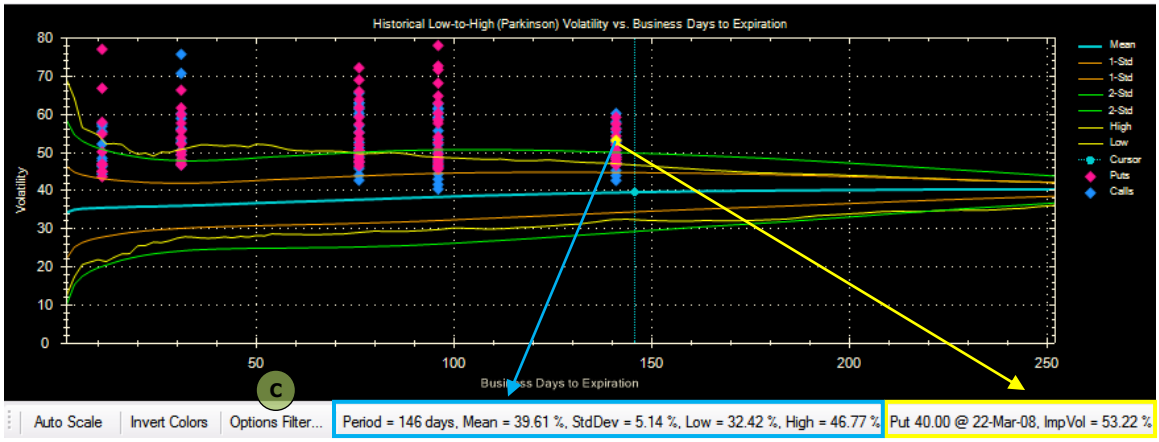
The historical volatility information is shown by seven curves –

- Mean: Mean historical-volatility for the time-period, over the last year.

- 1-Std/2-Std: Mean historical volatility ±1/2 standard-deviation.
- Low: Lowest historical-volatility for the time-period, during the last year.
- High: Highest historical-volatility for the time-period, during the last year.

The options implied volatility appears on the graph with diamond shaped markers. Call options are marked with cyan diamonds (♦) while Put options are marked with pink diamonds (♦).

To identify an option behind a marker, move the mouse near the marker. The diamond marker will change its color to yellow (♦) and the selected-option information will appear on the bottom of the graph in addition to the historical-volatility information –



By comparing the implied-volatility of an option to the historical-volatility for similar time-period you can determine whether an option is over-priced or under-priced. Note that you should always check if options are over-priced/under-price due to special circumstances or known future events regarding the underlying stock.

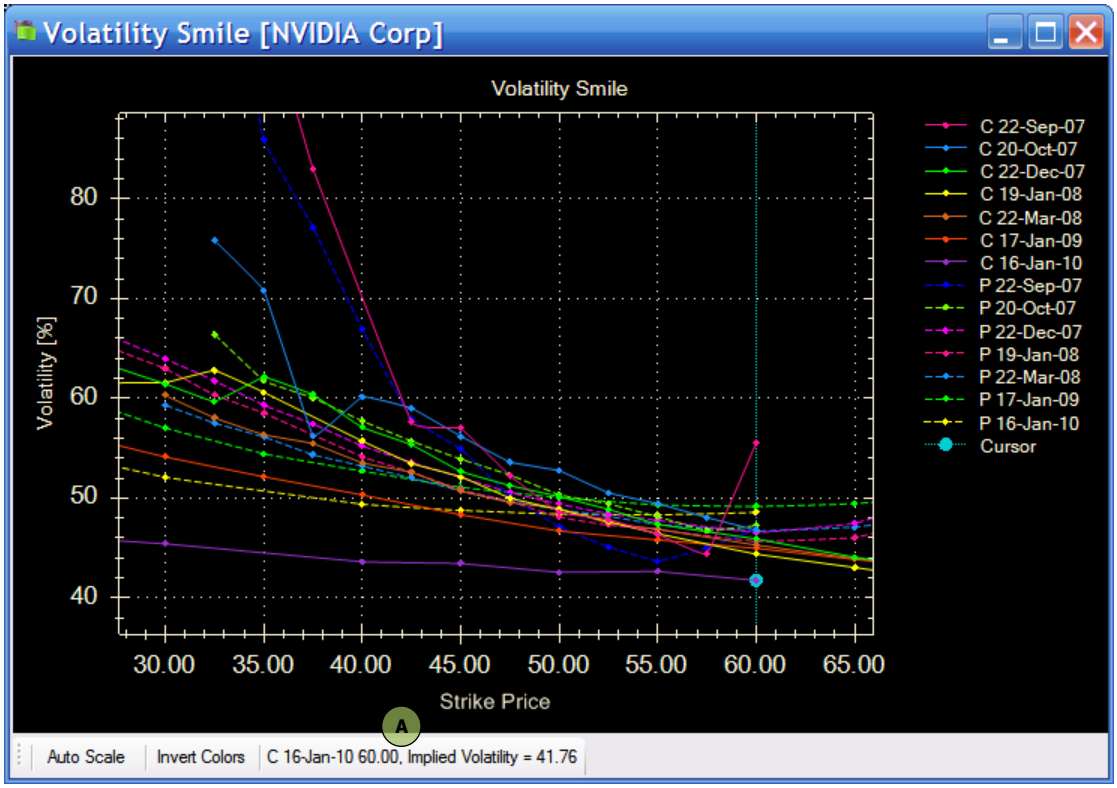
Note: You can modify which algorithm is used to calculate the historical volatility, by changing the configuration from the configuration-window (volatility tab).

To select a sub-set of the options that will be shown on the volatility-cone graph, click the **Options-Filer** button (**C**) and select the options you would like to show. Using the options-filter you can also select only the options that are used in the strategy-table.

5. Volatility Smile

The volatility smile graph shows the volatility smile of options chain on different expiration dates. This graph can be used to estimate the volatility change of an option given the distance from the ATM option.

Click the **Volatility-Smile** button to open the volatility-smile window –

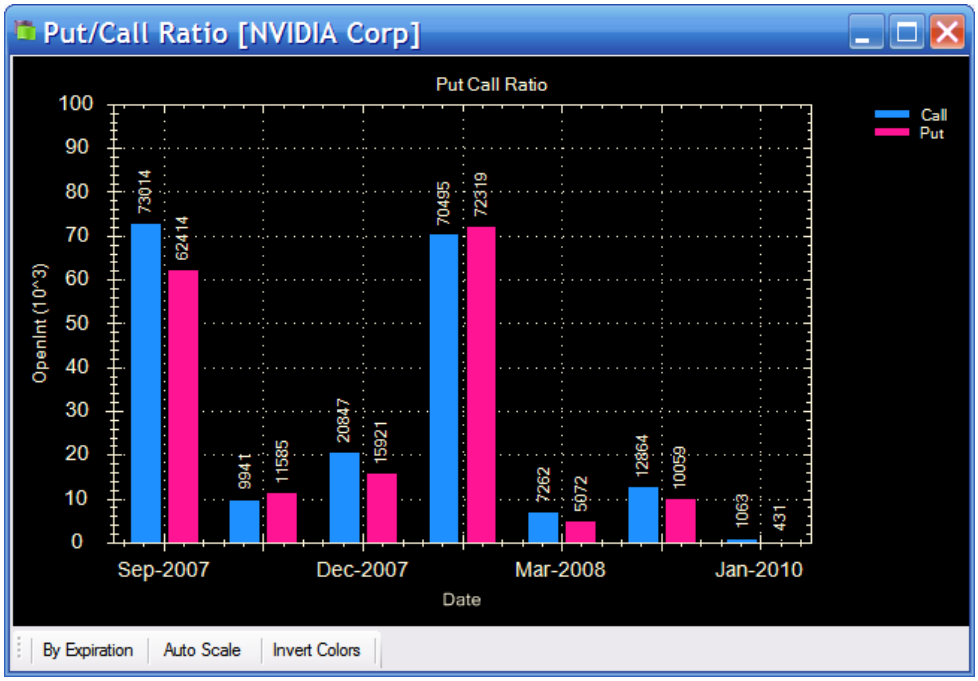


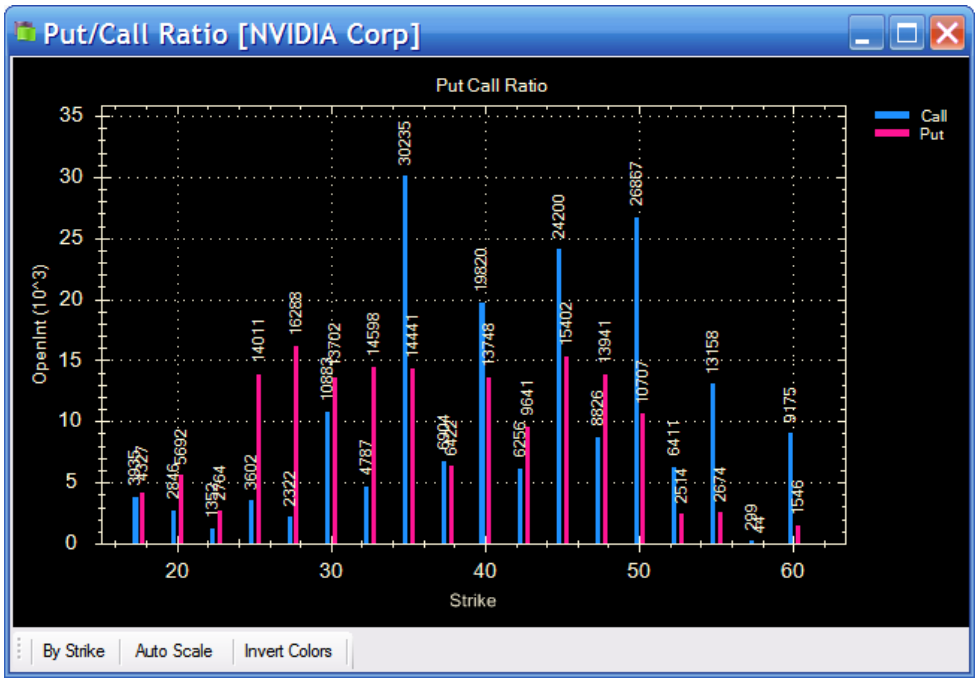
To check the detail of a specific open move the graph cursor close to the option point and check the details at the text label below the graph (**A**).

6. Put/Call Ratio

The put/call ratio smile graph shows the put/call open interest ratio in different expiration dates or different strike prices.

Click the **Put/Call-Ratio** button to open the put/call ratio window –



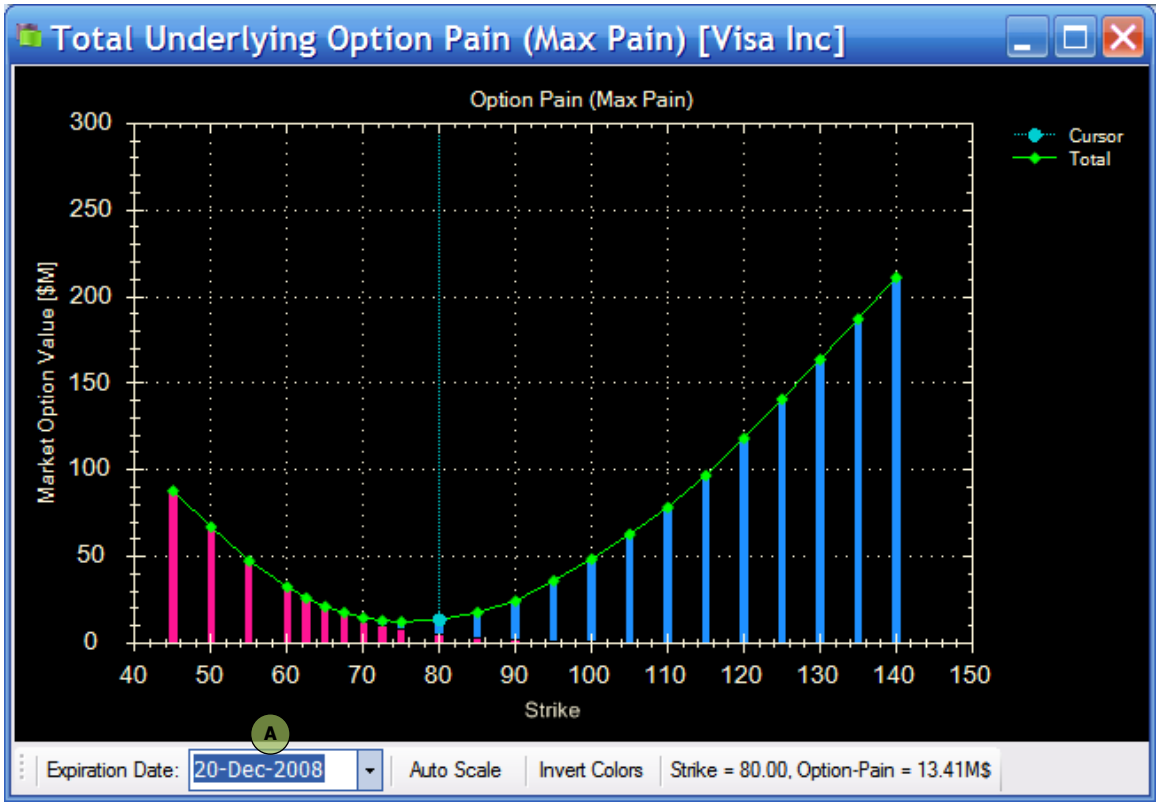


7. Underlying Option Pain

The maximum underlying option pain is the underlying price point which will cause the maximum loss for option buyers as a whole at the expiration date. It is believed that money-makers are making extra money by selling options (both calls and puts), and they will manipulate the stock price approaching expiration date to minimize their liability to exercise options, causing "maximum option pain" to the option buyers.

The option pain graph shows the total option exercise value at the expiration date. The minimum point of the graph is the buyers "maximum option pain".

Click the **Option Pain** button to open the option pain window –



To show the option pain for specific expiration date, select the expiration date from the list below the graph (**A**).

8. Greek Calculator

The Greek calculator is a generic options-pricing calculator that provides the ability to estimate option price and Greek value in different scenarios.

Click the **Greek-Calc** button to open the Greek-calculator window –

A. Select option for the options-table (**A**) to quickly populate the options parameters with the specific option parameters.

B. Modify the parameters you wish to test (such as stock price, interest-rate, volatility, etc.)

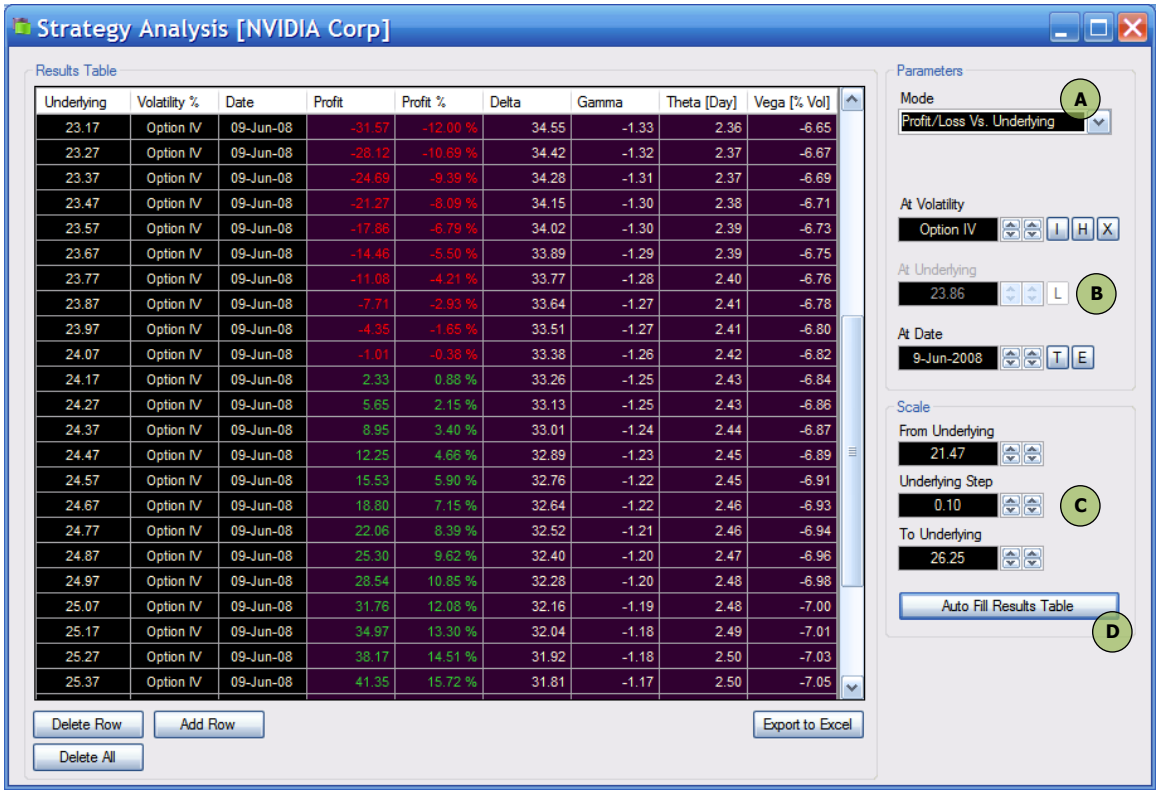
C. Click the **C** button (**B**) next to the parameter you wish to resolve (calculate from the other values).

NEW in 1.4

9. Strategy Analysis

The strategy analysis tool is a tool for checking the strategy performance/Greeks under different scenarios of volatility, time and underlying price. The result table can also be exported to Excel, for further analysis, graphing.

Click the **Analysis** button to open the Strategy Analysis window –



A. Select analysis mode (**A**), to select which parameter will be changed and which will be fixed.

B. Select the fixed parameters values (**B**).

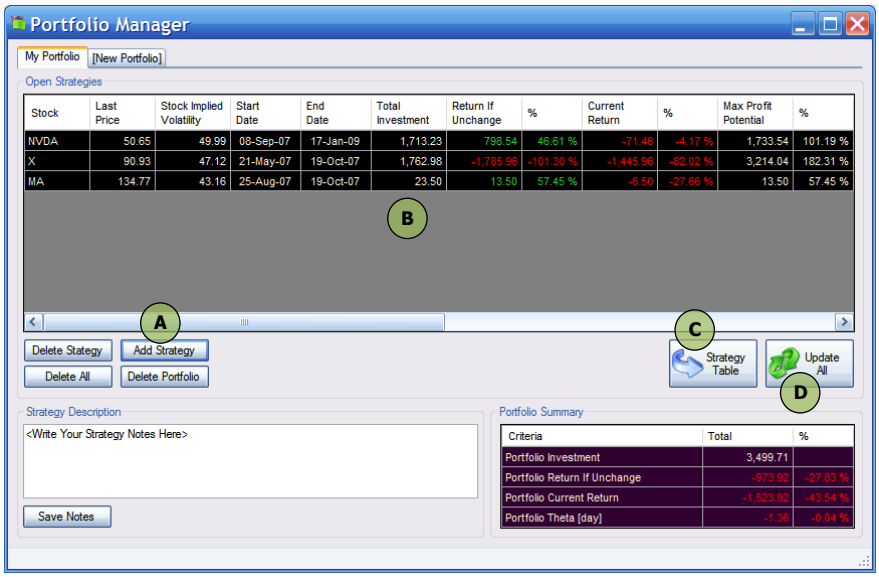
C. Select the range of the changing parameter and the accuracy step (**C**).

D. Click the **Auto Fill Results Table** button (**D**) to automatically populate the results table.

10. Portfolio Manager

The portfolio manager allows managing multiple strategies by loading saved OPO files, reviewing a summary of each strategy, and a summary of the portfolio.

Click the **Portfolio-Mgmt** button to open the portfolio manager window –



A. Click the **Add-Strategy** button (**A**) to add saved-strategy to the portfolio.

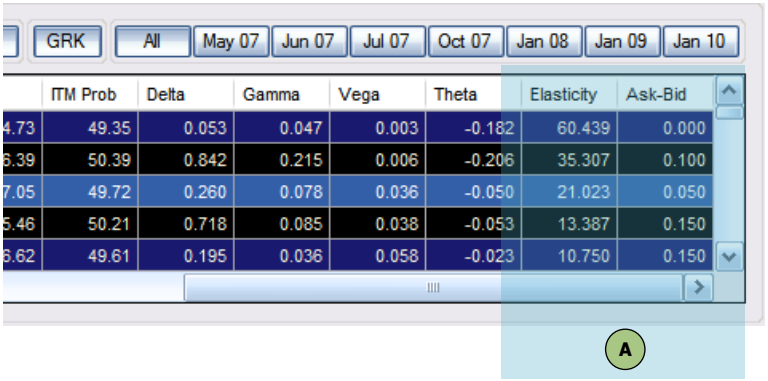
B. Once you add a strategy you can review it summary at the top table (**B**).

C. To move the strategy to the main window double click on the strategy row (**B**), or select the strategy and click on the **Strategy-Table** button (**C**).

D. To download the latest market data for all the strategies and update the OPO files click the **Update-All** button (**D**).

11. Setup Customized Indicators

OptionsOracle provide the ability to setup two customized indicators that will enable you to filter options based on your preferred algorithm. The indicators appear in the options-chain table (**A**) when Greek mode is enabled (**GRK** button is clicked).



Indicators equation can be simple equation or complex Java-Script based expressions. We will cover here the basic expression format which covers most of the cased -

Variables

A variable is a "container" for information you want to store. You can refer to a variable by name. By default the following global variables are defined -

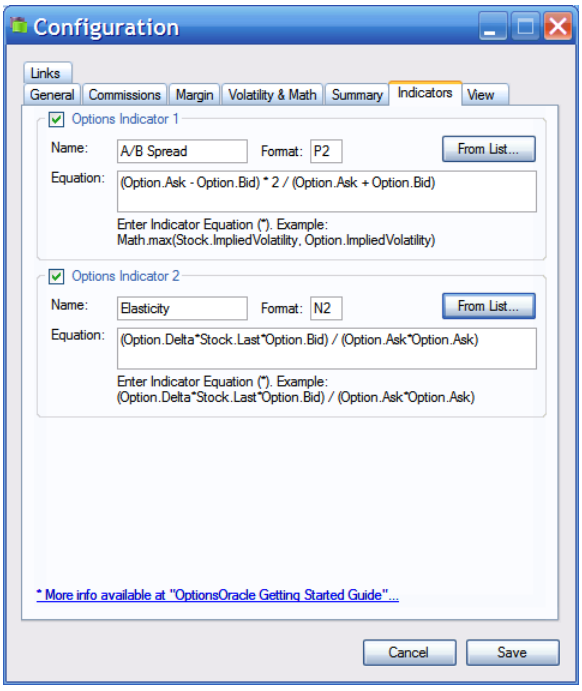
Option Variables	Stock Variables	Global Variables
Option.Type	Stock.Last	Global.StartDate
Option.Strike	Stock.Change	Global.EndDate
Option.Expiration	Stock.Open	Global.FederalIterest
Option.Symbol	Stock.Low	Global.DebitIterest
Option.Last	Stock.High	Global.CreditIterest
Option.Change	Stock.Bid	
Option.TimeValue	Stock.Ask	
Option.Bid	Stock.Volume	
Option.Ask	Stock.HistoricalVolatility	
Option.Volume	Stock.ImpliedVolatility	
Option.OpenInt		
Option.Stock		
Option.StocksPerContract		
Option.ImpliedVolatility		
Option.Delta		
Option.Gamma		
Option.Vega		
Option.Theta		
Option.TheMoney		
Option.ITMProb		
Option.TimeToExpiration		
Option.Indicator1		
Option.Indicator2		

Functions

You may use mathematical formulas which includes JavaScript functions -

Method	Description
Math.abs(x)	Returns the absolute value of a number
Math.exp(x)	Returns the value of E^x
Math.floor(x)	Returns the value of a number rounded downwards to the nearest integer
Math.log(x)	Returns the natural logarithm (base E) of a number
Math.max(x,y)	Returns the number with the highest value of x and y
Math.min(x,y)	Returns the number with the lowest value of x and y
Math.pow(x,y)	Returns the value of x to the power of y
Math.random()	Returns a random number between 0 and 1
Math.round(x)	Rounds a number to the nearest integer
Math.sqrt(x)	Returns the square root of a number
Math.E	Returns Euler's constant (approx. 2.718)
Math.LN10	Returns the natural logarithm of 10 (approx. 2.302)
Math.LOG10E	Returns the base-10 logarithm of E (approx. 0.434)
Math.SQRT1_2	Returns the square root of 1/2 (approx. 0.707)
Math.SQRT2	Returns the square root of 2 (approx. 1.414)

To configure an indicator, open the configuration window by clicking the **Config** button and click the **Indicator** button –



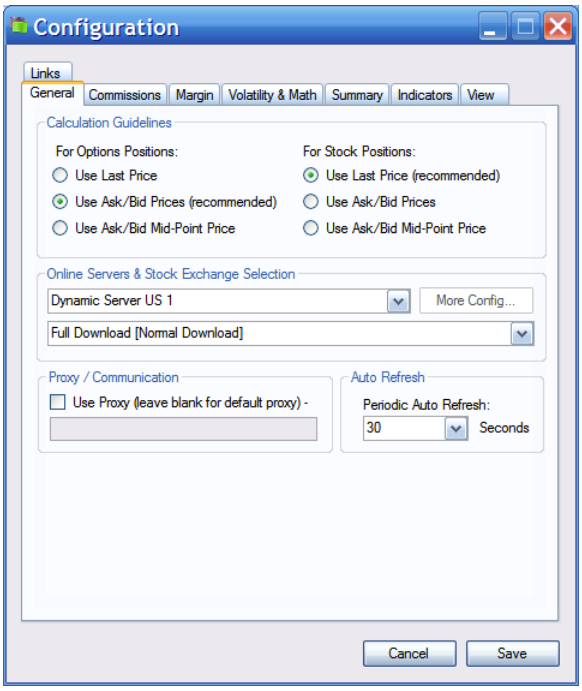
Examples of Indicator Equations

1. Math.max(Option.Last, (Option.Ask + Option.Bid) * 0.5)

2. Math.min(Stock.ImpliedVolatility, Option.ImpliedVolatility)

12. Setup your Private Settings

Before you start using OptionsOracle, we suggest that you open the configuration window (by clicking the **Config** button), and customize OptionsOracle behavior to your preferred configuration.



The configuration window allows you to control the following –

A. General calculation guidelines (whether OptionsOracle will use last-prices or ask/bid prices).

B. Online Server Control. By default OptionsOracle connects to the US server. If you would like to work with stocks from different location (such as Canada, India, Australia or Europe) you should change the Preferred Online Server accordingly.

   It is highly recommended to use the dynamic-servers and not the static-servers, since the dynamic servers provide more features and are more robust. However if you have communication problem with the dynamic servers, you can try working with the static ones.

C. Commissions and Interest Rate. Setup your broker account commissions and interest rates.

D. Margin account configuration. Setup your broker margin account configuration. By default the account is set to CBOE default margin account. Note that you must

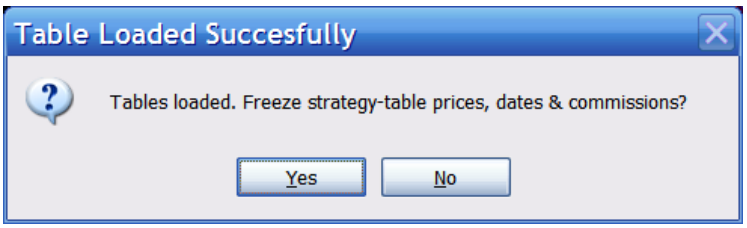
use margin account (and not cash account) in order to have short positions in your strategy.

E. Volatility. Configures how OptionsOracle use volatility in its calculation, and whether it should download historical volatility (if available).

13. Save / Load Strategy

OptionsOracle provides you the ability to save and load strategies. This feature is especially useful when you open a real-life strategy and want to use OptionsOracle to check its current performance, and if needed what follow-up actions you can take.

To load a pre-saved strategy, click the **Load** button, and select the strategy to load. After you have selected the strategy you might get the following message –

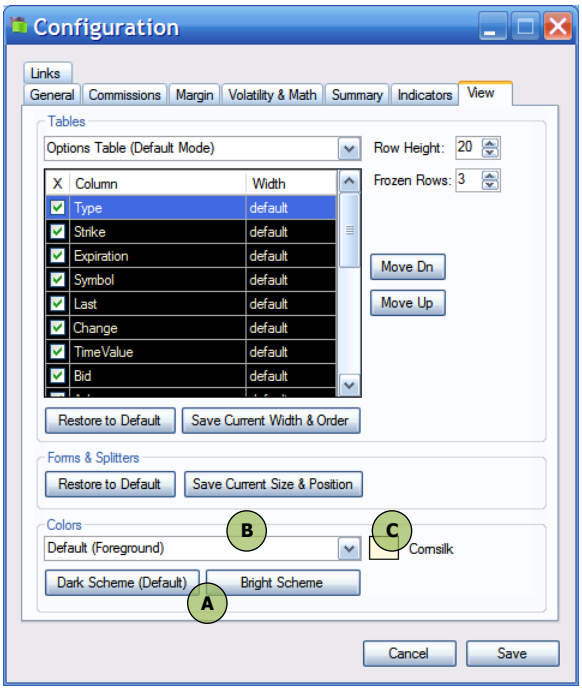


With the above question, OptionsOracle asks you if you would like to freeze the positions prices, commissions in the strategy table, as well as the start/end dates. If you press "Yes" the prices will be frozen and would not change even if you refresh the quote. Again this is useful if you are loading a strategy that you wish to check its current performance.

To save a strategy, simply click the **Save** button, to open the save-dialog. From the save-dialog you can also select the file format.

14. Control Default View

OptionsOracle provide the ability to control / save the default view (color, and sizes) from the Configuration → View window.



CONTROL COLOR SCHEME

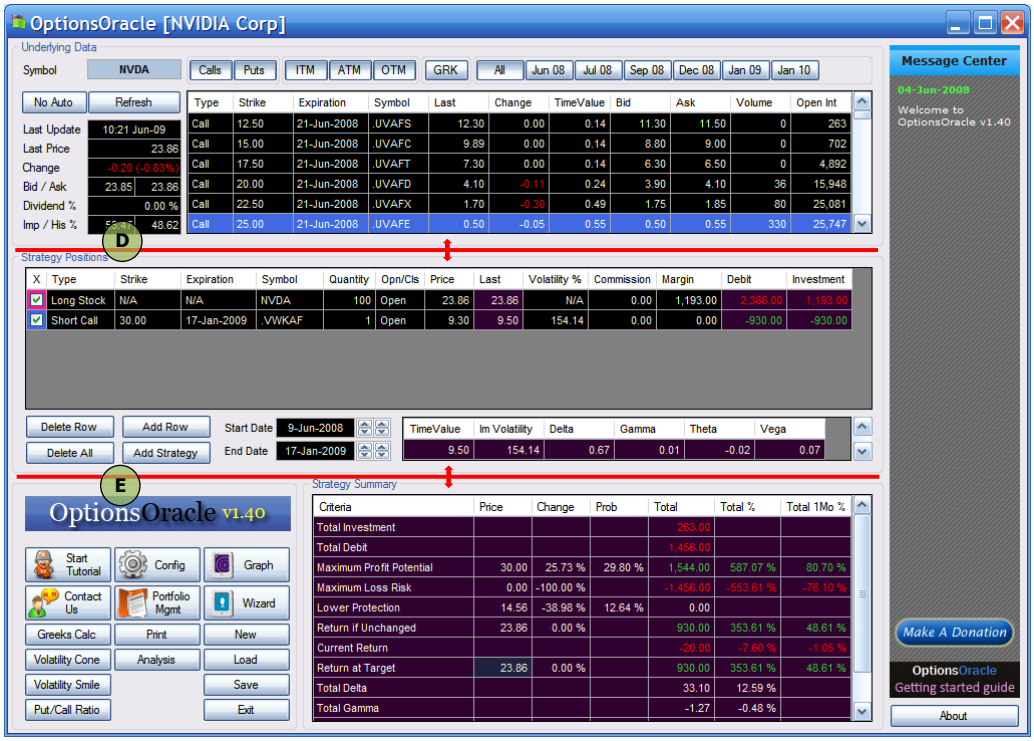
Don't like black? ☺ - No problem. To simply change the color scheme from black to bright colors click the **Dark-Scheme** or **Bright-Scheme** buttons (**A**). You can also change specific colors in the color scheme or build a customized color scheme by selecting the color function (**B**) and click on the color box (**C**) to open the color selection dialog.

CONTROL TABLES COLUMNS/ROWS SIZE

To control the default table columns width change the specific columns, open the Configuration → View window, and click the **Save Columns Width** button. To change the rows height, select the preferred width from the Configuration → View window.

CONTROL MAIN-WINDOW SPLITTERS AND FORMS SIZES

OptionsOracle main window has two horizontal splitters – between the stock-data and market-strategy sections (**C**), and between the market-strategy and strategy-summary sections (**D**) -



To change the splitter location move the mouse slowly in the splitter area until the mouse pointer will change to the horizontal resize state. When the mouse is in the horizontal resize state, click and drag the splitter to the desired location.

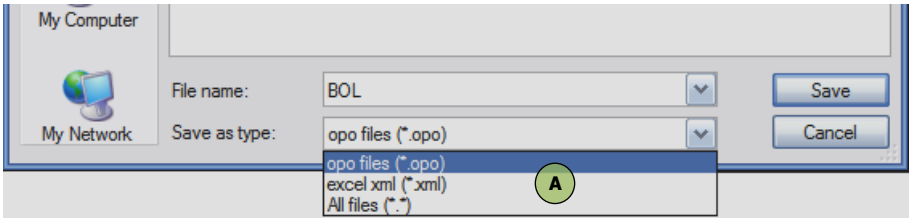
After you have set the splitters locations and the form sizes open the Configuration → View window, and click the **Save Size & Position** button to save the current state as default state.

15. Export Data to Excel

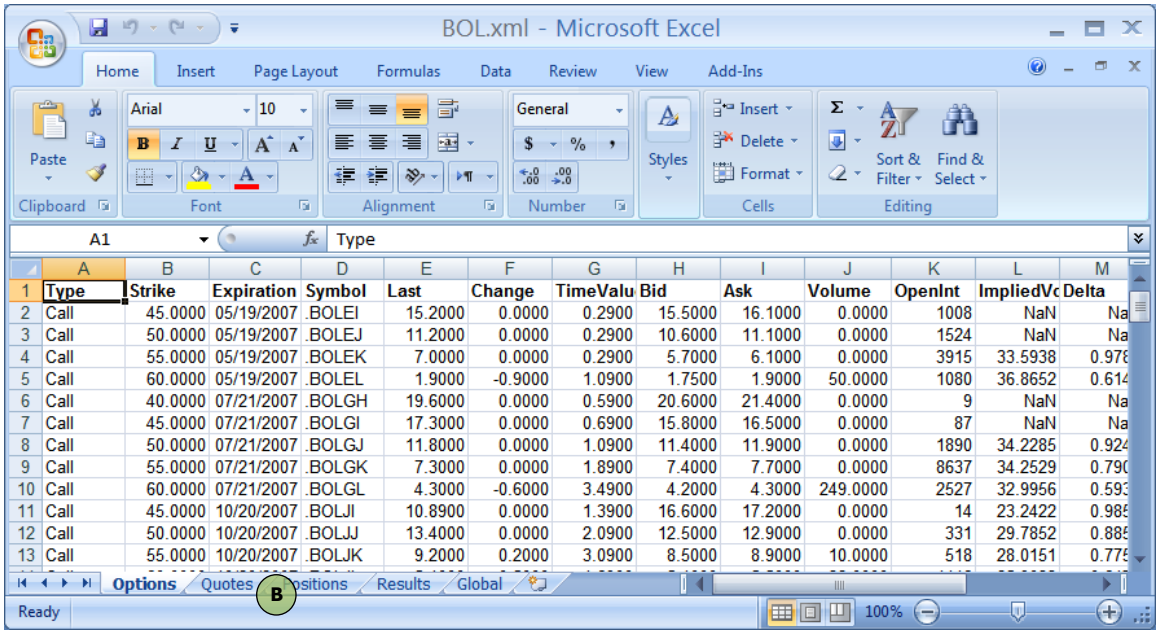
You can export the OptionsOracle tables (stock quote, options-chain, strategy, and results) to Excel XML format using the save-dialog.

A. Click the **Save** button, to open the save-dialog.

B. Change the save-type (**A**) to "excel xml" and Click **Save**.



C. Open saved XML file from Excel -



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Type	Strike	Expiration	Symbol	Last	Change	TimeValu	Bid	Ask	Volume	OpenInt	ImpliedVo	Delta
2	Call	45.0000	05/19/2007	.BOLEI	15.2000	0.0000	0.2900	15.5000	16.1000	0.0000	1008	NaN	Na
3	Call	50.0000	05/19/2007	.BOLEJ	11.2000	0.0000	0.2900	10.6000	11.1000	0.0000	1524	NaN	Na
4	Call	55.0000	05/19/2007	.BOLEK	7.0000	0.0000	0.2900	5.7000	6.1000	0.0000	3915	33.5938	0.978
5	Call	60.0000	05/19/2007	.BOLEL	1.9000	-0.9000	1.0900	1.7500	1.9000	50.0000	1080	36.8652	0.614
6	Call	40.0000	07/21/2007	.BOLGH	19.6000	0.0000	0.5900	20.6000	21.4000	0.0000	9	NaN	Na
7	Call	45.0000	07/21/2007	.BOLGI	17.3000	0.0000	0.6900	15.8000	16.5000	0.0000	87	NaN	Na
8	Call	50.0000	07/21/2007	.BOLGJ	11.8000	0.0000	1.0900	11.4000	11.9000	0.0000	1890	34.2285	0.924
9	Call	55.0000	07/21/2007	.BOLGK	7.3000	0.0000	1.8900	7.4000	7.7000	0.0000	8637	34.2529	0.790
10	Call	60.0000	07/21/2007	.BOLGL	4.3000	-0.6000	3.4900	4.2000	4.3000	249.0000	2527	32.9956	0.593
11	Call	45.0000	10/20/2007	.BOLJI	10.8900	0.0000	1.3900	16.6000	17.2000	0.0000	14	23.2422	0.985
12	Call	50.0000	10/20/2007	.BOLJJ	13.4000	0.0000	2.0900	12.5000	12.9000	0.0000	331	29.7852	0.885
13	Call	55.0000	10/20/2007	.BOLJK	9.2000	0.2000	3.0900	8.5000	8.9000	10.0000	518	28.0151	0.775

D. Navigate between the tables by selecting the worksheet (**B**).

16. Contact Us

If you have any question, problem or would like to tell us how to make OptionsOracle better please click the **Contact-Us** button, fill the form and click **Send!** If you are reporting a problem, it will help us if you choose to attach the Database and Configuration in your submission.

17. Support Us

As you can see, time was invested in developing OptionsOracle. If you find it useful, please donate to support the continued development of OptionsOracle –

http://www.samoasky.com/donation.html

Enjoy!