How to use the Portfolio Analyser?

1. Introduction

Portfolio Analyser is a tool for users to analyse the impact on the value/delta of an options portfolio caused by change in underlying asset price and time to expiry. The analyser can cater for portfolio consisting up to combinations of four different options and one underlying. It is useful for those setting up covered call strategy.

IMPORTANT NOTE

i)   Please note that the analyser only demonstrates theoretical outcomes under different assumptions about market scenarios. Theoretical outcomes can deviate from the actual market environment. Investors are not advised to make investment trading decisions based on this tool only.

ii)   Commission, taxes and other transaction costs are not considered in this tool.

2. Overview

The analyser can cater for both stock and index options portfolio. Users can click respective tab to analyse their corresponding portfolios. The tool consists of two pages:

A.   Settings page
B.   Results page

Users must fill in details in settings page before reaching the analysis results page. The settings page is divided into two parts:

1 Underlying Setting

2 Positions Setting

A. Settings page

Portfolio Analyser – Settings

Edit Settings and Positions

Portfolio Analyser can be used to analyse the impacts of changes in the underlying stock price/index level, volatility and time to expiry on the value and delta of a portfolio comprising stock/index futures and stock/index options positions.

Please note that the analyser only demonstrates theoretical outcomes under different assumptions about market scenarios. Theoretical outcomes can deviate from the actual market environment. Investors are not advised to make investment trading decisions based on this tool only.

1. **Underlying Setting**
   Please choose underlying stock/index, other input fields will be automatically filled if applicable.
2. **Positions**
   Please input positions on options (and underlying if necessary).

❶ Underlying Setting

| Stock | Index | ⊙ Last Updated: 01/03/2013 16:33 (All data delayed at least 15 minutes) |

Stock Name	(00388) HKEx - HEX
Current Date (D/M/Y)	01 / 03 / 2013	Stock Price $ 140.100	Interest Rate* 0.13 %
1st Ex-Dividend Date*	26 / 04 / 2013	1st Dividend Amount* $ 1.4600
2nd Ex-Dividend Date*	21 / 08 / 2013	2nd Dividend Amount* $ 2.2840
Lot Size	100

Reset   Next Step

For default data:
*Interest Rate and Dividend information are provided by Reuters. Dividend information includes both actual and forecast values.

❶ Underlying Setting

❷ Positions Setting

Options:

	Buy / Sell	No. of Contract(s)	Contract Size (Shares)	Call / Put	Expiry	Strike ($)	Price ($)	Equivalent Shares	Contract Premium	
●	Buy			Call	---	---		---	---	🖎
●	Buy			Call	---	---		---	---	🖎
●	Buy			Call	---	---		---	---	🖎
●	Buy			Call	---	---		---	---	🖎
							Total Premium	---		

Update

Underlying:

Buy / Sell   No. of Shares

● Buy [   ]

Ⓟ Paid   Ⓡ Received

Previous Step   Reset   Show Analysis

❷ Positions Setting

B. Results page

Analysis Type
● Profit & Loss ○ Delta

Chart Legend
☑ Net Position
☑ +1 Mar 2013 140.00 Call
☑ -1 Mar 2013 150.00 Call

Variables
Test Date (D/M/Y): 1/3/2013
Day(s) to earliest expiration: 20

Stock Price on Test Date
140.100

Profit / Loss Summary   Edit Settings and Positions

	Initial Settings		Evaluation Results			
Position	Price	Position Value	Price	Position Value	P / L	Delta
1) +1 Mar 2013 140.00 Call	2.70	270.00	2.70	270.00	0.00	0.516
2) -1 Mar 2013 150.00 Call	-0.35	-35.00	-0.35	-35.00	0.00	-0.101
3) ---	---	---				
4) ---	---	---				
5) ---	---	---				
Total		235.00		235.00	0.00	0.415

3. How to use the analyser?

The steps of analysing both stock and index options portfolios are very similar. Hence this document will focus on analysing stock options portfolio only.

A. Settings page

1 Underlying Setting

| Stock | Index | Last Updated: 30/10/2012 16:35 (All data delayed at least 15 minutes) |

Stock Name: (00388) Hong Kong Exchanges and Clearing Limited - HEX

Current Date (D/M/Y) 02 02 2013   Stock Price $ 125.600   Interest Rate* 0.42 %

1st Ex-Dividend Date* 25 04 2013   1st Dividend Amount* $ 1.7250

2nd Ex-Dividend Date* 26 08 2013   2nd Dividend Amount* $ 2.0790

Lot Size 100

Reset   Next Step

For default data:
*Interest Rate and Dividend information are provided by Reuters. Dividend information includes both actual and forecast values.

Step 1

Click Stock or Index tab to select underlying type.

Step 2

Stock price, interest rate, dividend information etc will be filled into input fields automatically.*

Step 3

Next Step

Press   to activate

*Users can fill in all input fields by themselves.

Note on default data:

Interest Rate and Dividend information are provided by Reuters. Dividend information includes both actual and forecast values.

Users need to set up their options (and underlying) positions in this positions setting section. A maximum of four options positions plus one underlying position can be inputted.

Step 1

Fill in the input fields marked with [ ]. The most updated price of the selected option contract will be filled automatically if available. (*Users can freely input option prices by themselves.)

Step 2

Contract size, equivalent shares of the option position, and contract premium (fields marketed with [ ]) will be loaded automatically.

Step 3

P or **R** indicates whether premium is to be paid or received respectively for this position. (Note: Investors always pay premium for buying options, and receive premium for selling options.)

Step 4

Click [ ] if you wish to evaluate the option based on the parameters inputted. Options/Warrants Calculator will be popped up in a separate window.

Step 5

Repeat the same procedures for other entries if you want to input additional options positions.

Step 6

Press [Update] to calculate the total premium paid or received.

Step 7

Some options strategies such as covered call, involve buying or selling the underlying shares as well. Input number of shares position in the field marked with [ ]. Please note that the buying or selling price is the same as the underlying price in Underlying Setting section.

Step 8

Press [Show Analysis] to go to results page.

B. Results page

The result page shows profit and loss or delta of the portfolio according to users' preferences. Results are displayed in a summary table.

Step 1

Choose to analyse the portfolio by "Profit & Loss" or "Delta" in the "Analysis Type" section.

Step 2

Choose positions to be shown in the chart in the "Chart Legend" section.

Step 3

Scroll the bar to adjust option's life and enter stock price in the "Variables" section to simulate the impact on the portfolio under different market scenarios.*

Step 4

Press Edit Settings and Positions if you want to amend the underlying and positions settings.

Profit / Loss Summary   Edit Settings and Positions

	Initial Settings			Evaluation Results			
Position	Price	Position Value	Price	Position Value	P / L	Delta
1) +1 Mar 2013 120.00 Call	3.20	3,200.00	3.20	3,200.00	0.00	0.546
2) +1 Mar 2013 122.50 Call	2.09	2,090.00	2.09	2,090.00	0.00	0.410
3) +1 Mar 2013 125.00 Call	1.26	1,260.00	1.26	1,260.00	0.00	0.286
4) +1 Mar 2013 127.50 Call	0.65	650.00	0.65	650.00	0.00	0.176
5) Sell 2000 Shares	-120.60	-241,200.00	-120.60	-241,200.00	0.00	-2.000
Total		-234,000.00		-234,000.00	0.00	-0.582

*Scroll "Day(s) to earliest expiration" to view the payoff profile at expiry day.

Note:

The analyser accepts changes in remaining life of the earliest expired option and stock price only. It is assumed that the implied volatility remains the same as the first day of the position has been set up. Implied volatility is calculated based on the underlying setting and option prices inputted in positions setting section.

C. Index tab

Please refer to section 3 for details.

Note:

For buying or selling index futures in positions setting section, it is assumed that the price of the futures is the same as the index level in underlying setting section.