

# HKE<sub>x</sub> STOCK OPTIONS

Introductory Guide to the Stock Options Corner



HKE<sub>x</sub>  
**STOCK  
OPTIONS**

**LEVERAGE YOUR  
INVESTMENT  
POWER** 

[www.hkex.com.hk/stockoptions/eng](http://www.hkex.com.hk/stockoptions/eng)

Payoff

Stock  
price

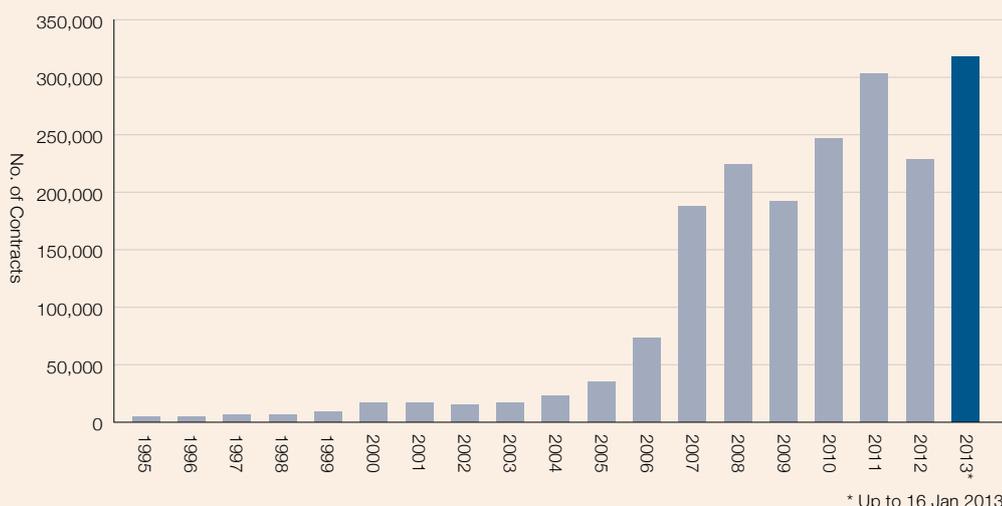
## About HKEx Stock Options

HKEx is one of the top Asian exchanges for stock options trading. The first stock option contract was listed in Hong Kong in 1995 and the options market has developed substantially since. Between 2002 to 2012, the average daily trading volume of stock options grew over fourteen times. Currently, the HKEx stock options average daily volume is over 300,000 contracts per day.

In response to market development, HKEx has set up a designated section for stock options on the HKEx website. HKEx Stock Options Corner aims to provide different kinds of investors with a comprehensive platform for obtaining information on HKEx stock options.

**Stock Options is the most actively traded listed derivative product in Hong Kong.**

## HKEx Stock Options Average Daily Volume 1995-2013



## Why do investors trade stock options?

### 1. Strong leverage effect

Investors only need to pay small portion of the contract value for option premium or collateral (margin) to enter into an option position.

### 2. Suitable in any market condition

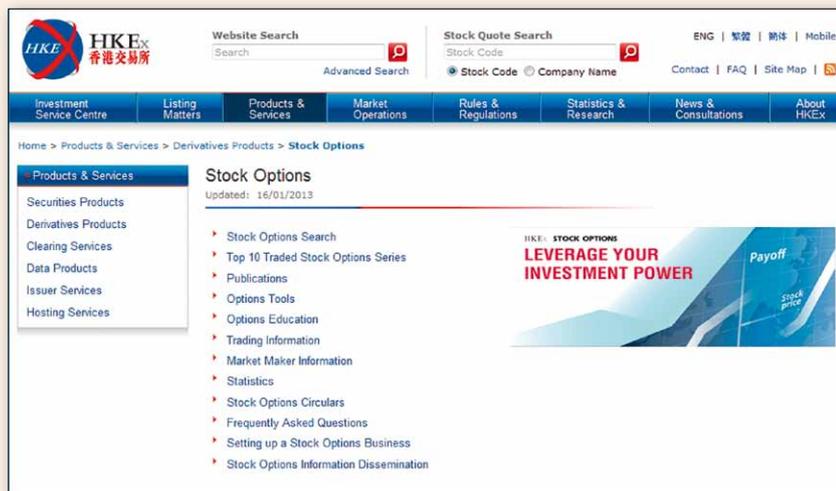
Stock options can be utilised in all sorts of market situations, including a bullish market, bearish market or even a stagnant market.

### 3. Good risk management

Options can be used as a tool to manage risks. (e.g. Longing a put option can protect an asset against its price drop)

## HKEx Website's Stock Options Corner

Please visit [www.hkex.com.hk/stockoptions/eng](http://www.hkex.com.hk/stockoptions/eng) to enter the HKEx Stock Options Corner. Alternatively you can visit the HKEx website ([www.hkex.com.hk](http://www.hkex.com.hk)). Select Products & Services, choose Derivatives Products and then Stock Options to reach this page.



[www.hkex.com.hk/stockoptions/eng](http://www.hkex.com.hk/stockoptions/eng)

The corner consists of 12 categories. This booklet will focus on new option tools and functions highlighted in six colours below:

1	Stock Options Search
2	Top 10 Traded Stock Option Series
3	Publications
4	Options Tools
5	Options Education
6	Trading Information
7	Market Maker Information
8	Statistics
9	Stock Options Circulars
10	Frequently Asked Questions
11	Setting up a Stock Options Business
12	Stock Options Information Dissemination

## Category: Stock Options Search

### Stock Options Search

Investors can use different selection criteria to search for stock options and sort the results accordingly.

#### Stock Options Search

Total no. of Underlying: 63

Underlying  OR  HKATS Code

Call / Put  Expiry

Moneyness: 5% ITM to 5% OTM

ITM: >15% OTM: >15%

Option Premium (%)\* 0% to 5%

\*Option Premium as % of Underlying Price

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Last Updated: 30/10/2012 11:44 (All data delayed at least 15 minutes)

Underlying Code	Underlying Name	HKATS Code	Call / Put	Expiry (D/M/Y)	Strike	Last Price	Price Change	Moneyness
	00001 Cheung Kong (Holding...	CKH	Call	29/11/12	107.50	5.550	-0.690	4.02% ITM
	00001 Cheung Kong (Holding...	CKH	Call	29/11/12	110.00	4.330	-0.180	1.79% ITM
	00001 Cheung Kong (Holding...	CKH	Call	29/11/12	112.50	3.000	-0.190	0.45% OTM
	00001 Cheung Kong (Holding...	CKH	Call	29/11/12	115.00	1.920	-0.220	2.68% OTM
	00001 Cheung Kong (Holding...	CKH	Call	29/11/12	117.50	1.120	-0.270	4.91% OTM
	00001 Cheung Kong (Holding...	CKH	Call	28/12/12	107.50	-	-	4.02% ITM
	00001 Cheung Kong (Holding...	CKH	Call	28/12/12	110.00	5.500	-0.050	1.79% ITM
	00001 Cheung Kong (Holding...	CKH	Call	28/12/12	112.50	4.160	-0.050	0.45% OTM
	00001 Cheung Kong (Holding...	CKH	Call	28/12/12	115.00	2.880	-0.270	2.68% OTM
	00001 Cheung Kong (Holding...	CKH	Call	28/12/12	117.50	2.220	-0.080	4.91% OTM

PREVIOUS 1 2 3 4 5 6 7 8 9 10 NEXT

#IV, Delta, Effective Gearing and Option Premium as % of Underlying Price are calculated based on last traded price of the option contract.

Select underlying stock (by stock code/name or HKATS code), option type (call/put) and expiry month.

Refine search criteria by choosing moneyness and option premium levels and press "Search".

Search results are sortable by various columns.

Shortcuts to Options/Warrants Calculator, Chart, and Stock Option Details Page.

**GLOSSARY** Gives explanations of different option terms such as moneyness, implied volatility, delta, theta and vega, and more.

## Stock Option Details

The "Stock Option Details" page contains price and key option contract information such as contract notional value, contract size and option premium (in % of underlying price). Other data such as delta and implied volatility are also available for more advanced investors.

### Stock Option Details

Underlying  
 OR

Call / Put  Expiry  Strike

Last Updated: 26/10/2012 18:58 (All data delayed at least 15 minutes)

**Hong Kong Exchanges and Clearing Limited** HKD 125.90 ▼ -2.451 (-1.95%)

**Oct 2012 - 125.00 Call**

Option Calculator OI Distribution Put / Call Ratio Export to CSV

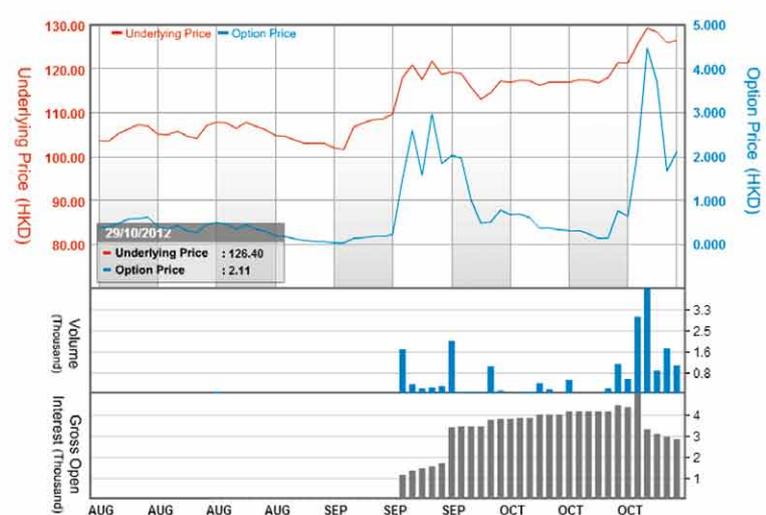
**Last Traded Price (As of 15:36:00)** 1.870 Bid / Ask 1.520 / 1.820 High / Low 2.380 / 1.560

Price Change (% Change) -0.240 (-0.11%) Volume 1773 Currency HKD

Underlying Price vs Option Price

Implied Volatility vs Option Price

Historical Volatility vs Implied Volatility



**Contract Information**  Glossary

Contract Notional Value	12,590.00	No. of Board Lot(s) of Underlying	1
Contract Size (Shares)	100	Call / Put	Call
Strike	125.00	Moneyness	0.71% ITM
Expiry (D/M/Y)	30/10/2012	Remaining day(s) until expiry	4
Effective Gearing (x)	40.77	Gearing (x)	67.33
Implied Volatility (%)	26.89	Delta (%)	60.55
Option Premium (%)*	1.49	Theta (Daily)	-0.1740
Previous Day Net Open Interest	2604	Vega	0.05
Previous Day Gross Open Interest	2858		

\*Option Premium as % of Underlying Price

#Effective Gearing, Gearing, Implied Volatility, Delta, Option Premium as % of Underlying Price, Theta (Daily), and Vega are calculated based on last traded price of the option contract.

Shortcuts to other functions

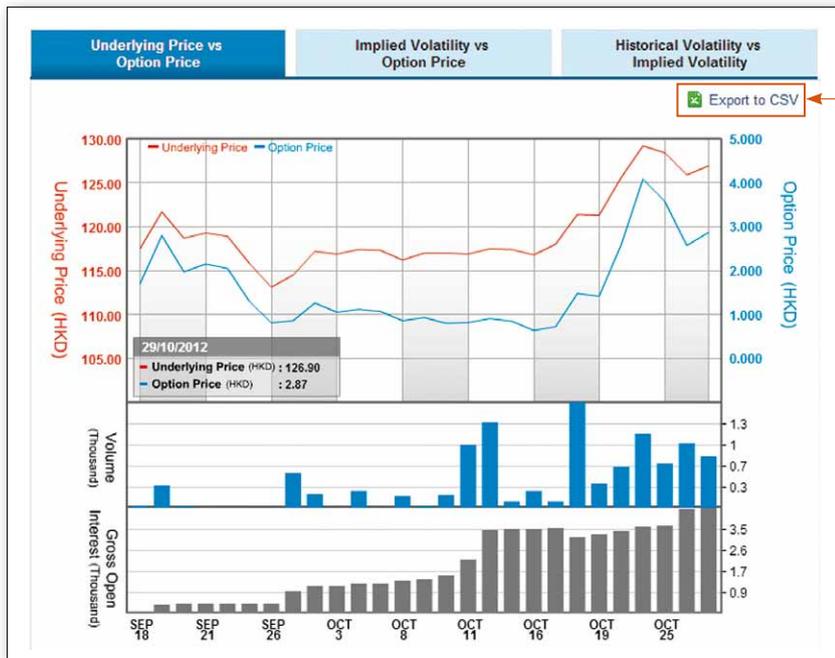
Price Information

Charts section

Other Key Contract Information:  
Gearing, Implied Volatility, Delta and Theta (Daily) etc.

### Underlying Price versus Option Price

This chart demonstrates the trend and relationship between the price of a stock and its related option.



Export to CSV function allows users to easily re-plot the graph for reports.

#### OPTION KNOWLEDGE

##### Relationship between underlying price and option price

Assuming all other factors remain constant, a call (put) option value increases when its underlying price increases (decreases).

### Implied Volatility versus Option Price

This chart demonstrates the trend and relationship between the stock option selected and its implied volatility.



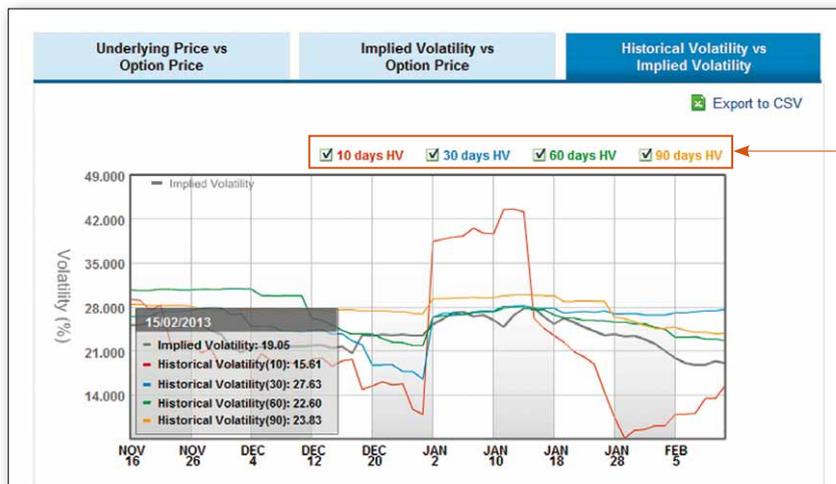
#### OPTION KNOWLEDGE

##### Usage of implied volatility

Implied volatility is a barometer to assess the expensiveness of a stock option.

## Historical Volatility versus Implied Volatility

This chart demonstrates the trend and relationship between the implied volatility of a selected stock option and historical volatility of its underlying stock.



User can choose different historical volatilities (HV).

### TRADING TIP

Investors are advised to study the historical volatility of the underlying stock before entering a stock option trade.

### OPTION KNOWLEDGE

#### Relationship between implied volatility and option price

Assuming all other factors remain constant, the value of an option increases (decreases) when its implied volatility increases (decreases).

Stock price

## Category: Top 10 Traded Stock Option Series

### Top 10 Traded Call Option Series

This page displays information of the most traded call option series of the day (in number of contracts).

Top 10 Traded Call Option Series									
Last Updated: 30/10/2012 11:59 (All data delayed at least 15 minutes)									
	Underlying Code	Underlying Name	Expiry (D/M/Y)	Strike	Last Trade Price	Price Change	Moneyness	Option Premium (%)*	Volume
	00386	China Petroleum & Chemical Corporation	27/06/2013	8.25	0.650	-	0.86% OTM	7.95	1900
	00939	China Construction Bank Corporation	29/11/2012	6.00	0.070	-0.010	3.99% OTM	1.21	1528
	00941	China Mobile Limited	29/11/2012	90.00	0.510	-0.170	5.26% OTM	0.60	1501
	00388	Hong Kong Exchanges and Clearing Limited	29/11/2012	130.00	2.150	-0.720	3.50% OTM	1.71	1303
	01398	Industrial and Commercial Bank of China Limited	29/11/2012	5.25	0.060	-0.040	3.96% OTM	1.19	1258
	00939	China Construction Bank Corporation	28/12/2012	5.75	0.240	-0.010	0.35% ITM	4.16	1100
	01398	Industrial and Commercial Bank of China Limited	28/12/2012	4.80	0.350	-0.050	4.95% ITM	6.93	1050
	03328	Bank of Communications Co., Ltd.	28/12/2012	6.00	0.140	-0.010	6.76% OTM	2.49	1030
	00857	PetroChina Company Limited	28/12/2012	12.00	0.110	0.040	11.11% OTM	1.02	845
	01398	Industrial and Commercial Bank of China Limited	28/12/2012	5.50	0.050	-0.020	8.91% OTM	0.99	752

\*Option Premium as % of Underlying Price

### Top 10 Traded Put Option Series

This page displays information of the most traded put option series of the day (in number of contracts).

Top 10 Traded Put Option Series									
Last Updated: 30/10/2012 11:59 (All data delayed at least 15 minutes)									
	Underlying Code	Underlying Name	Expiry (D/M/Y)	Strike	Last Trade Price	Price Change	Moneyness	Option Premium (%)*	Volume
	02628	China Life Insurance Company Limited	27/03/2013	21.00	0.000	-	6.87% OTM	0.00	2750
	00700	Tencent Holdings Limited	29/11/2012	260.00	4.060	0.090	3.49% OTM	1.51	2398
	03988	Bank of China Limited	27/03/2013	3.20	0.200	0.010	1.59% ITM	6.35	2100
	00386	China Petroleum & Chemical Corporation	27/06/2013	8.25	0.740	-0.020	0.86% ITM	9.05	1900
	00939	China Construction Bank Corporation	29/11/2012	5.75	0.140	0.010	0.35% OTM	2.43	1740
	03328	Bank of Communications Co., Ltd.	29/11/2012	5.75	0.230	0.030	2.31% ITM	4.09	1353
	00388	Hong Kong Exchanges and Clearing Limited	29/11/2012	120.00	1.630	0.200	4.46% OTM	1.30	1033
	00386	China Petroleum & Chemical Corporation	29/11/2012	8.25	0.270	0.020	0.86% ITM	3.30	1021
	03968	China Merchants Bank Co., Ltd.	28/12/2012	13.00	0.210	0.120	9.09% OTM	1.47	1020
	00857	PetroChina Company Limited	29/11/2012	11.00	0.410	-0.010	1.85% ITM	3.80	961

\*Option Premium as % of Underlying Price



#### OPTION KNOWLEDGE

##### Option premium (%)

It is the amount paid/received expressed in % of spot underlying stock price when an investor buy/sell an option.

## Category: Options Tools

### Options/Warrants Calculator

The theoretical price of an option is affected by various parameters including the price/level of its underlying stock/index, strike price, volatility, interest rates and time to expiry. Investors can utilise the “Options/Warrants Calculator” available on the HKEx website to estimate the theoretical price of stock options/warrants in various market conditions by changing the parameters.

#### Options / Warrants Calculator

The theoretical value of an option is affected by a number of factors such as the underlying stock price/index level, strike price, volatility, interest rate, dividend and time to expiry.

[Download User Guide](#)

**Options / Warrants Background Information**  
Last Updated: 30/10/2012 16:35 (All data delayed at least 15 minutes)

Stock Option   
  Index Option   
  Stock Warrant   
  Index Warrant

Stock Name: (00388) Hong Kong Exchanges and Clearing Limited - HEX  
 Expiry Month: Mar 2013    Strike: 145.00    [Load Default Data](#)

Stock Price: \$ 125.60    Implied Volatility (per year)# 27.00 %  
 Strike Price: \$ 145.00    Expiry (D/M/Y): 27 03 2013  
 Interest Rate (per year)\* 0.42 %  
 1<sup>st</sup> Ex-Dividend Date\* 25 04 2013    1<sup>st</sup> Dividend Amount\* \$ 1.7250  
 2<sup>nd</sup> Ex-Dividend Date\* 26 08 2013    2<sup>nd</sup> Dividend Amount\* \$ 2.0790  
 Exercise Style<sup>A</sup>  European Style     American Style  
 Pricing Model<sup>A</sup>  Binomial Model     Black Scholes Model

[Reset](#) [Calculate](#)

For default data:  
#Implied volatility (IV) is calculated from last traded price of selected option series. If there is no trade of both call and put options during the day, IV from last trading day will be retrieved.  
\*Interest Rate and Dividend information are provided by Reuters. Dividend information includes both actual and forecast values.  
<sup>A</sup>Exercise style of Stock Options listed on HKEx is American style. Binomial model is used to evaluate American style option.

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#### Result

Glossary	Call	Put
<b>Theoretical Price</b>	<b>2.629</b>	<b>21.829</b>
Delta	0.228	-0.775
Vega (per % of Implied Volatility)	0.269	0.266
Theta (daily)	-0.023	-0.021
Gamma (per % of Stock Price)	0.018	0.018
Rho (per % of Interest Rate)	0.107	-0.328

[Click to calculate implied volatility from market prices](#)

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#### Price / Volatility Matrices for Option Prices

Volatility Interval: 1 %    Price Interval: 0.5    [Update](#)

Price	Call					Price	Put				
	Volatility (%)						Volatility (%)				
	25.00	26.00	27.00	28.00	29.00		25.00	26.00	27.00	28.00	29.00
123.60	1.813	2.024	2.234	2.444	2.654	123.60	23.021	23.230	23.439	23.648	23.856
124.10	1.906	2.116	2.327	2.537	2.758	124.10	22.612	22.822	23.031	23.240	23.459
124.60	1.998	2.209	2.420	2.630	2.895	124.60	22.204	22.413	22.623	22.833	23.092
125.10	2.090	2.301	2.512	2.763	3.031	125.10	21.795	22.005	22.215	22.461	22.727
125.60	2.182	2.394	2.629	2.899	3.167	125.60	21.386	21.597	21.829	22.095	22.362
126.10	2.274	2.495	2.765	3.034	3.304	126.10	20.978	21.196	21.462	21.730	21.998
126.60	2.366	2.630	2.900	3.170	3.440	126.60	20.569	20.828	21.096	21.364	21.633
127.10	2.494	2.765	3.036	3.306	3.577	127.10	20.193	20.461	20.730	20.999	21.269
127.60	2.628	2.900	3.171	3.442	3.713	127.60	19.825	20.095	20.365	20.635	20.905

User guide for the option calculator for pricing an option.

Users may click different tabs for correspondence types of options or warrants they want to calculate.

Click here to load default data or user can choose to input his own parameters.

#### IMPORTANT

Please note that this calculator is an educational tool intended to help individuals learn how options and warrants work. The actual market environment may not be the same as what the theoretical models assume. Users of this calculator should not make investment decisions based upon values generated by it only.

Theoretical prices and other useful options/warrants figures.

Click here if you wish to backward-calculate Implied Volatility by keying in option prices.

The Price/Volatility matrix table gives user one summary for option price changes with different volatility assumptions.

## Portfolio Analyser

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

## Settings Page

**Portfolio Analyser**

**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 tool demonstrates theoretical outcomes under different assumptions about market scenarios only. It does not reflect the actual market environment and is not intended to do so. This tool should not be used for making investment trading decisions.

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

**1 Underlying Setting**

**Stock** | **Index** | Last Updated: 30/10/2012 17:45 (All data delayed at least 15 minutes)

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

Current Date (D/M/Y): 04 / 02 / 2013 | Stock Price: \$ 125.600 | Interest Rate\*: 0.37 %

1<sup>st</sup> Ex-Dividend Date\*: 25 / 04 / 2013 | 1<sup>st</sup> Dividend Amount\*: \$ 1.7250

2<sup>nd</sup> Ex-Dividend Date\*: 26 / 08 / 2013 | 2<sup>nd</sup> Dividend Amount\*: \$ 2.0790

Lot Size: 100

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

**2 Positions Setting**

Options:

Buy / Sell	No. of Contract(s)	Contract Size (Shares)	Call / Put	Expiry	Strike (\$)	Price (\$)	Equivalent Shares	Contract Premium	
Buy	1	100.00	Call	Mar 201	150.00	2.35	100.00	235.00	P
Sell	1	100.00	Call	Mar 201	160.00	1.05	100.00	105.00	R
Buy		100.00	Call	Mar 201	65.00	0.000	...	...	P
Buy		100.00	Call	Mar 201	65.00	0.000	...	...	P
<b>Total Premium</b>								<b>130.00</b>	<b>P</b>

Underlying:  
Buy / Sell No. of Shares  
Buy

**Downloads**

User guide on how to use the portfolio analyser tool.

**Stock** | **Index**

Select relevant asset type for suitable calculation model.

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

Current Date (D/M/Y): 04 / 02 / 2013 | Stock Price: \$ 125.600 | Interest Rate\*: 0.37 %

1<sup>st</sup> Ex-Dividend Date\*: 25 / 04 / 2013 | 1<sup>st</sup> Dividend Amount\*: \$ 1.7250

2<sup>nd</sup> Ex-Dividend Date\*: 26 / 08 / 2013 | 2<sup>nd</sup> Dividend Amount\*: \$ 2.0790

Select underlying asset. Information will be filled automatically. Input fields are editable.

Press to go to Options Positions Setting section.

Press to go to Analysis Results section.

Press to go back to Underlying Setting section.

### IMPORTANT

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.

## Analysis Results Page



Choose analysis type, graph type and adjust variables such as remaining days of option and underlying price to analyse the change in portfolio value and delta.

Portfolio gain/loss and delta change are shown in chart.

Portfolio gain/loss and delta change are shown in table.

### OPTION KNOWLEDGE

#### Delta

Delta of an option refers to the sensitivity of an option price to the change in its underlying asset price. It is used as an assessment of impact on an option portfolio caused by a change in underlying asset price for a certain unit.

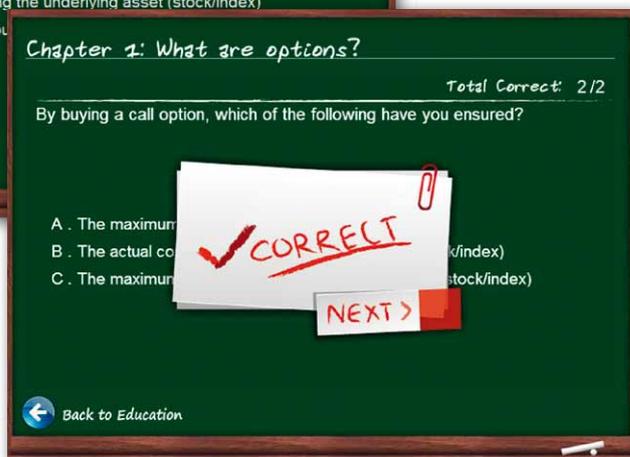
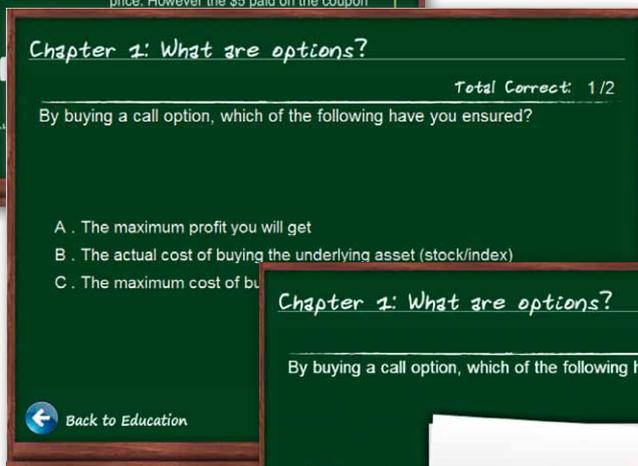
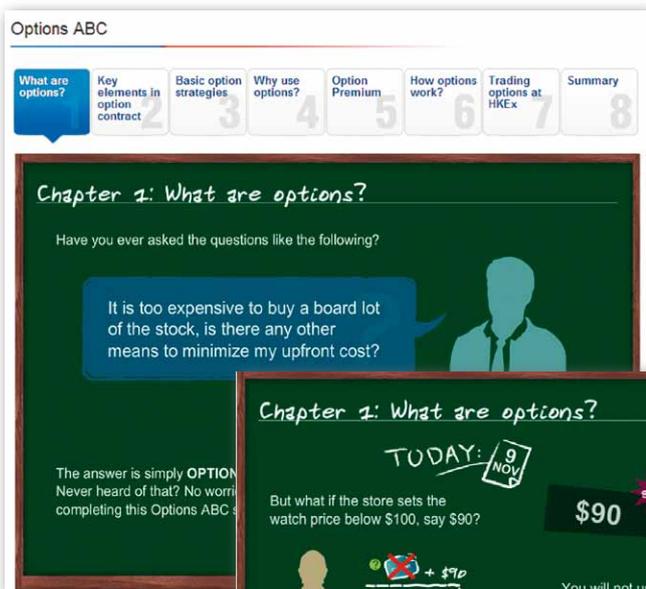
## Category: Options Education

### Online Courses

This section consists of various tutorials for users to easily acquire knowledge in relation to stock options.

### Options ABC

A total of eight chapters of interactive basic options education are covered in this section. They are suitable for those who are not familiar with stock options.



Remember to try the quiz at the end of each chapter to test your knowledge!

## Options Strategies

In this section, a series of common options strategies are introduced. Their applications and characteristics are all covered.

Strategies Category	Market View			
	Directional		Neutral	
	Bullish	Bearish	Stagnant	Volatile
Single option	Long Call Short Put	Long Put Short Call		
Spread	Bull Call Spread Bull Put Spread Ratio Call Back Spread	Bear Call Spread Bear Put Spread Ratio Put Back Spread	Long Call Calendar Spread Long Put Calendar Spread Ratio Call Spread Ratio Put Spread Long Butterfly Spread	Short Call Calendar Spread Short Put Calendar Spread Short Butterfly Spread
Combination	Synthetic Long Stock	Synthetic Short Stock	Short Straddle Short Strangle	Long Straddle Long Strangle
Option + Stock	Synthetic Long Call	Synthetic Long Put	Covered Call Writing Protective Short Stock	



### OPTION KNOWLEDGE

#### Diversity of options strategies

Investors can profit from an up market, down market or a consolidation market with a correct market view.

There are over 25 options strategies for 4 different market views here. Users can select and click the strategies to understand the details and check the payoff profiles.

#### Bull Call Spread

Strategies	Bull Call Spread
Component	Buy lower strike price/level call, sell higher strike price/level call of the same month
Potential Profit	<ul style="list-style-type: none"> <li>When the stock price/index level is above the break-even point</li> <li>Limited to the difference between the two strike prices/levels minus the net premium paid</li> </ul>
Maximum Loss	Net premium paid
Time Value Impact	Neutral
Break-even	Lower strike price/level plus net premium paid
Remarks	As different from a Bull Put Spread which would result in net premium received, a Bull Call Spread would result in net premium paid, as the premium for the lower strike price/level call is higher than that of the higher strike price/level call.

**Example**

Net Position     +1 May 190 Call     -1 May 220 Call

Component	Buy ABC May \$190 Call, pay \$30, and sell ABC May \$220 Call, receive \$10
Net Premium	Pay \$30-\$10=\$20
Break-even	\$190+\$20=\$210
Profit when	Stock price is above \$210
Potential Profit	(\$220-\$190)-\$20=\$10
Potential Loss	\$20

Explanation of the options strategy.

Illustrate the strategy by an example and the profit and loss graph at expiry.

## Category: Trading Information

### Margin Data Search

Margin Data Search can be used to find out the minimum margin requirement per contract for a single short position in the corresponding option series.

#### Margin Data Search

This tool can be used to find out the minimum margin requirement per contract for a single short position in the corresponding options series.

Underlying  OR  HKATS Code

Date (D/M/Y)

**65 Results** All data delayed at least 15 minutes

PREVIOUS 1 2 3 4 5 6 7 NEXT

(Underlying Code) Underlying Name - HKATS Code	
(00001) Cheung Kong (Holdings) Limited - CKH	▲
(00002) CLP Holdings Limited - CLP	▲
(00003) The Hong Kong and China Gas Company Limited - HKA	▲
(00003) The Hong Kong and China Gas Company Limited - HKG	▲
(00004) The Wharf (Holdings) Limited - WHL	▲
(00005) HSBC Holdings Plc. - HKB	▲
(00006) Power Assets Holdings Limited - HEH	▲
(00011) Hang Seng Bank Limited - HSB	▲
(00012) Henderson Land Development Company Limited - HLD	▲
(00013) Hutchison Whampoa Limited - HWL	▲

PREVIOUS 1 2 3 4 5 6 7 NEXT

**Underlying:**  
Search by stock code/stock name or HKATS code.

**Date:**  
Select date and press "Search".

### TRADING TIP

The maximum loss of buying an option (call or put) is the premium paid, hence there will be no margin call. Investors who enter a short option position may be required to top up their maintenance margin when the movement of underlying stock(s) or volatility moves against the short position. For details, please consult your broker or visit HKEx Stock Options Corner ([www.hkex.com.hk/stockoptions/eng](http://www.hkex.com.hk/stockoptions/eng)).

## Gross Margin Estimator

The gross margin estimator allows investors to estimate minimum margin requirement for multiple option positions.

### Gross Margin Estimator

This tool sums up the minimum margin required for short positions on multiple stock options contracts.

Last Updated: 30/10/2012 12:02 (All data delayed at least 15 minutes)

Underlying	Call / Put	Expiry	Strike	No. of Contract(s) shorted	Contract Size (Shares)	Gross Margin
(00388) Hong Kong Exchanges and Cle	Put	Nov 12	100.00	1	100.00	HKD 200
(00388) Hong Kong Exchanges and Cle	Put	Nov 12	90.00	1	100.00	HKD 100
(00388) Hong Kong Exchanges and Cle	Call	Nov 12	150.00	1	100.00	HKD 400
(00388) Hong Kong Exchanges and Cle	Call	Nov 12	160.00	1	100.00	HKD 200

**Total Gross Margin :** HKD 900

Select underlying stock, option type, expiry date and strike price.

Enter total number of contracts shorted.

### TRADING TIP

No margin is needed for a long position in stock option contracts. Investors need to pay only the option premium upfront.

### TRADING TIP

Investors owning the underlying stock of the derived stock option may use shares of the underlying stock to replace cash for the margin of writing the call (as long as the value of the long stock position is equal to or more than the notional value represented by the stock option short position). There will be **NO margin call** to short a call option in this case. For details please refer to the covered call strategy in the Options Strategies section in the HKEx Stock Options Corner.

Stock price

## Category: Statistics

### Stock Options Exercised

A one-stop location for stock options exercised information. Data can be displayed in either a table or graphical format for easier viewing. Users can check historical records on early exercise here.

#### Stock Options Exercised

Underlying: (00005) HSBC Holdings Plc.

Date (D/M/Y) From: 29/12/2011 To: 28/01/2013 Search

**Details of Options Exercised**  
**HSBC Holdings Plc.**  
 from 29/12/2011 to 28/1/2013 Export to CSV

Date	Underlying Code	Underlying Name	Currency	Strike	No. of Contract(s) Exercised	Equivalent Shares Exercised	Exercised Turnover (\$)
22/10/12	00005	HSBC Holdings Plc.	HKD	44.00	19	7,600	334,400.00
22/10/12	00005	HSBC Holdings Plc.	HKD	46.00	30	12,000	552,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	48.00	30	12,000	576,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	50.00	76	30,400	1,520,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	57.50	146	58,400	3,358,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	60.00	1,881	752,400	45,144,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	62.50	2,318	927,200	57,950,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	65.00	4,194	1,677,600	109,044,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	67.50	3,748	1,499,200	101,196,000.00
22/10/12	00005	HSBC Holdings Plc.	HKD	70.00	6,042	2,416,800	169,176,000.00
19/10/12	00005	HSBC Holdings Plc.	HKD	50.00	60	24,000	1,200,000.00
14/08/12	00005	HSBC Holdings Plc.	HKD	40.00	120	48,000	1,920,000.00
14/08/12	00005	HSBC Holdings Plc.	HKD	41.00	30	12,000	492,000.00
14/08/12	00005	HSBC Holdings Plc.	HKD	42.00	90	36,000	1,512,000.00
14/08/12	00005	HSBC Holdings Plc.	HKD	43.00	30	12,000	516,000.00

PREVIOUS 1 2 NEXT

Total No. of Contract(s) Exercised: 20,985  
 Total Equivalent Shares Exercised: 8,394,000  
 Total Exercised Turnover (HKD): 540,547,800.00

**Total No. of Shares Exercised vs Date** Period Shown: 3 Months

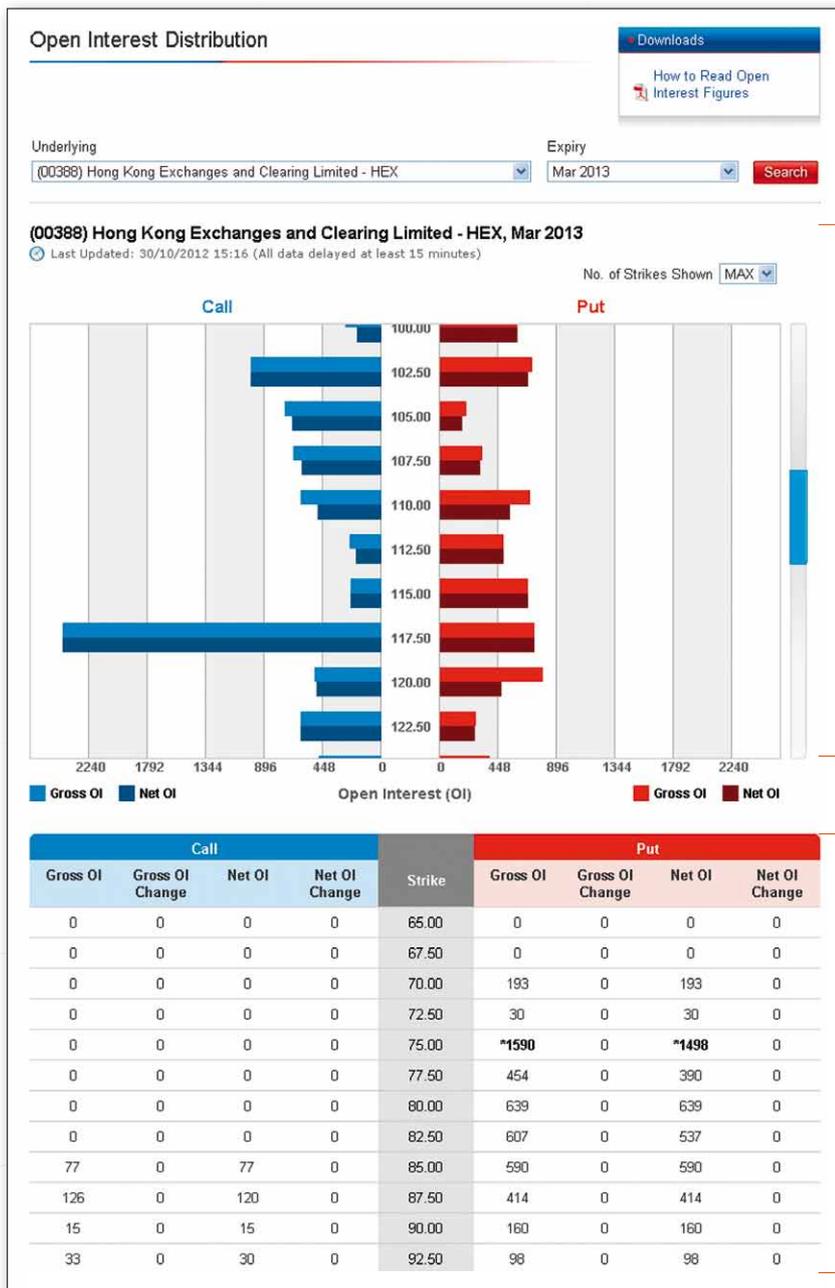
**No. of Shares Exercised vs Strikes** No. of Strikes Shown: 40

Details of stock options exercised are shown in table format. Results can be sorted by different columns.

Results are displayed in interactive charts.

## Open Interest Distribution

Open interest information of any listed stock option can be obtained in this section in either table or graphical format. Users can easily discover which option series the market is focusing on.



Option strike with the largest open interest can be spotted on the interactive chart easily.

Open interest (OI) figures and OI changes are shown in table format.

## Put/Call Ratio

Put/Call ratio up to the previous trading day is available in this section.

### Put / Call Ratio

Put/Call Ratio is the number of put options traded divided by the number of call options traded in a given period. Some investors use this ratio as an indicator of the market direction.

Underlying:

Date (D/M/Y) From:    To:

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#### Put / Call Ratio Chart

All

from 30/8/2012 to 29/10/2012

Date (D/M/Y)	Option Volume		Put / Call Ratio
	Call	Put	
29/10/2012	127,179	145,151	1.14
26/10/2012	153,432	167,512	1.09
25/10/2012	155,625	165,576	1.06
24/10/2012	211,483	183,192	0.87
22/10/2012	131,044	130,060	0.99
19/10/2012	120,141	127,082	1.06
18/10/2012	177,654	181,287	1.02
17/10/2012	146,989	152,908	1.04

Trend of Put/Call Ratio can be observed from the chart in a user-friendly way.

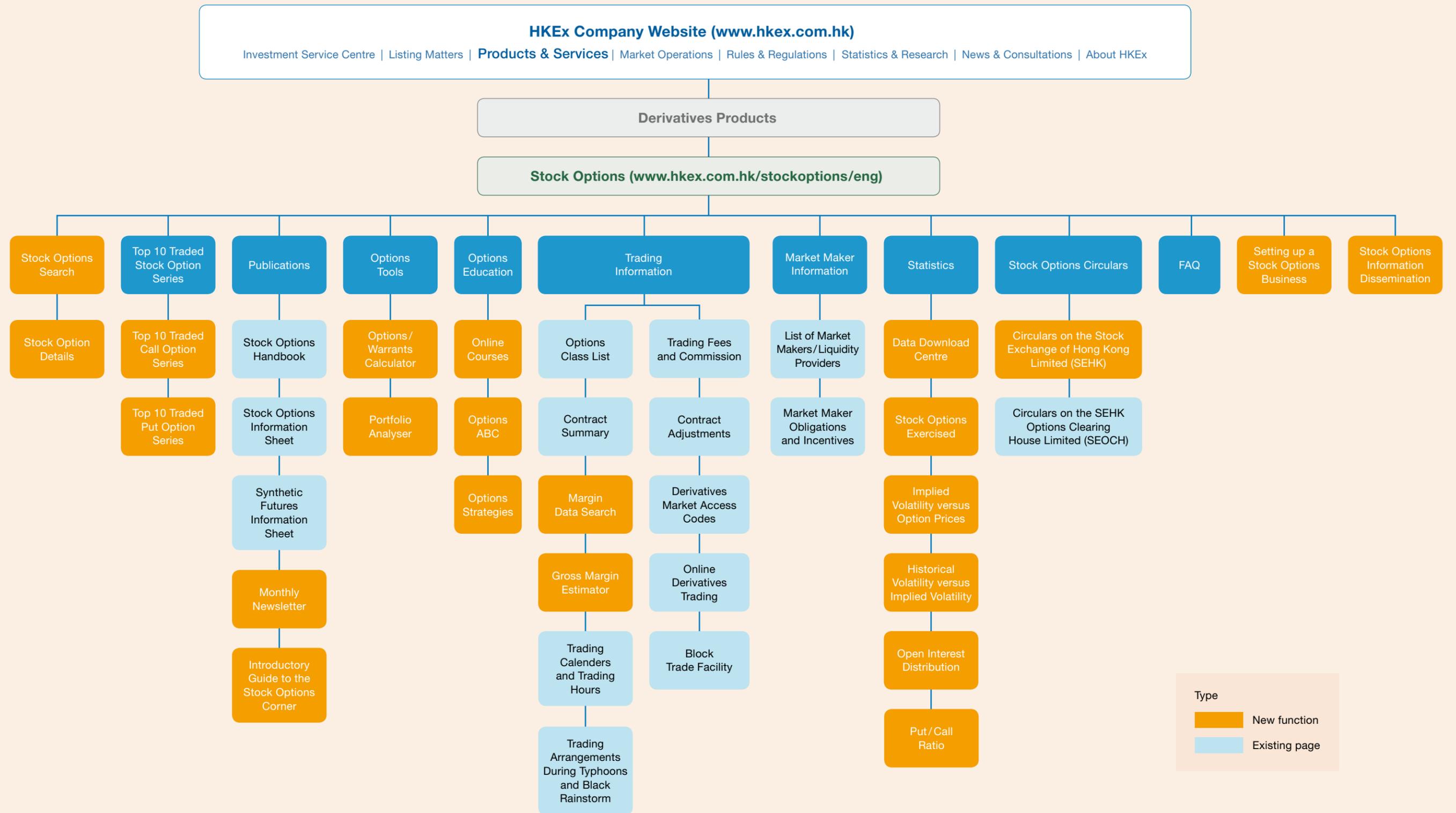
Option traded volume and Put/Call Ratio data are displayed in table format.



### OPTION KNOWLEDGE

Some investors use the put/call ratio as an indicator of the market direction.

## Site Map



## How can a stock options business be set up?

Please access “Setting up a Stock Options Business” in the corner. This section contains related information for exchange participants.

## Where can I find real time stock option prices?

Please access “Stock Options Information Dissemination” in the corner. This section contains information about public channels disseminating stock options information.

Stock options is the most actively-traded listed derivative product in Hong Kong (in terms of number of contracts). It is also widely used in many structured products like Equity-Linked Notes (ELN). As stock options become more popular, we hope that you will find the new features of the stock options corner useful.

## Appendix: Trading information of stock options

<b>Trading Hours</b>	Morning session: 9:30 a.m. – noon Afternoon session: 1:00 p.m. – 4:00 p.m.
<b>Option Types</b>	Puts and calls.
<b>Contract Size</b>	For majority of the contracts, one contract represents one board lot of underlying shares. Investors are advised to check the contract size of the stock option contract before placing an order. Please visit HKEx Stock Option Corner for details.
<b>Contract Months</b>	A variety of expiry months are available.
<b>Expiry Day</b>	The business day immediately preceding the last business day of the contract month.
<b>Exercise Style (American)</b>	Options can be exercised at any time up to 6:45 p.m. on any business day and including the last trading day. Investors are advised to check with their brokers for the arrangement.

### Risks of Trading Stock Options

Options involve a high degree of risk. Losses from options trading can exceed your initial margin funds and you may be required to pay additional margin funds on short notice. Failure to do so may result in your position being liquidated and you being liable for any resulting deficit. You must therefore understand the risks of trading in options and should assess whether they are right for you. You are encouraged to consult a broker or financial adviser on your suitability for options trading in light of your financial position and investment objectives before trading.

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