HSBC

Options

Investor Education Basics

Options contracts are derivative instruments. They are financial contracts that give the buyer the right, but not the obligation, to buy or sell an underlying asset (e.g. stocks, market indices, commodities, currencies, etc.) from/to the seller at a specified strike price on or before a specified date. When you buy an options contract, you pay a premium for the right to buy or sell the underlying asset. On the other hand, if you are the options contract seller, you receive a premium from the buyer, and you have the obligation to buy or sell the underlying asset from/to the buyer if the buyer exercises the option.

Exchange-traded options are standardised options contracts that are listed in exchanges. Major options exchanges around the world include the Chicago Mercantile Exchange and Chicago Board of Trade ("CME Group"), New York Mercantile Exchange ("NYMEX"), Intercontinental Exchange ("ICE"), Eurex Exchange, Hong Kong Stock Exchange ("HKSE") and Hong Kong Futures Exchange ("HKFE").

How does it work?

Before understanding more about the mechanics for trading options, there are some key terms you should know in relation to options contracts:

Term	Description
Underlying asset	This can be stocks, indices, currencies, interest rates or commodities such as oil, soybean and gold.
Call option	A call option gives the buyer the right, but not the obligation, to buy the underlying asset from the seller. The buyer of a call option would normally exercise the option when the market price of the underlying asset is higher than the strike price.
Put option	A put option gives the buyer the right, but not the obligation, to sell the underlying asset to the seller. The buyer of a put option would normally exercise the option when the market price of the underlying asset is lower than the strike price.
Option premium	This is the cost to buy a call or put option. Intrinsic value and time value are two of the components that affect options premium.
Intrinsic value	This is the difference between the market price of the underlying asset and the strike price of the options contract.
Time/extrinsic value	This represents the amount the buyer is willing to pay for the chance that the options contract will become more profitable (as a result of favorable movements in the price of the underlying asset) before its expiry date.
Strike/exercise price	This is the pre-determined price at which the underlying asset can be bought or sold when the option is exercised.
Contract size	The quantity of the underlying asset that an options contract represents. For example if the underlying asset of an options contract is a stock, the contract size will be the number of shares that will be bought or sold if the option is exercised.
Contract multiplier	The weight that is multiplied by the contracted price when calculating the contracted value.
Contract month	The month in which an options contract expires. If an option is exercised, either physical delivery of the underlying asset or settlement by cash must take place before the end of this month.
Expiry date	The last day on which the buyer of an options contract can exercise the option and buy or sell the underlying asset.
Exercise style	Most options are either American or European style. An American-style option can be exercised during any trading day on or before the expiry date. A European-style option can only be exercised on the expiry date.
Official settlement price	The price of the underlying asset as determined by the clearing house, which is used to calculate the settlement value of an options contract.
Settlement method	An options contract can be settled either in cash or by physical delivery of the underlying asset, subject to the contract specifications.
Initial margin	When you sell a call or put options contract, you are generally required to deposit an initial margin against which your positions are marked to market. However, a few exchanges also require options buyers to post margin against which their positions are marked to market, rather than paying a premium.
Maintenance margin	This is the minimum level of net equity that is required to keep a contract open.
Margin call	If the subsequent price movement of an options contract is unfavourable, the floating loss may cause net equity to fall below the maintenance margin, which gives rise to a margin shortfall. This will trigger a margin call and you will have to make up the margin shortfall in the prescribed time, otherwise the contract may be liquidated without further notice.
Roll-over	Roll-over involves closing out the expiring position in options contracts first and opening a new position with a later expiry date but the same contract specifications.

Options Payoffs

The below payoff diagrams illustrate how an option's total profit or loss depends on the price of its underlying asset.

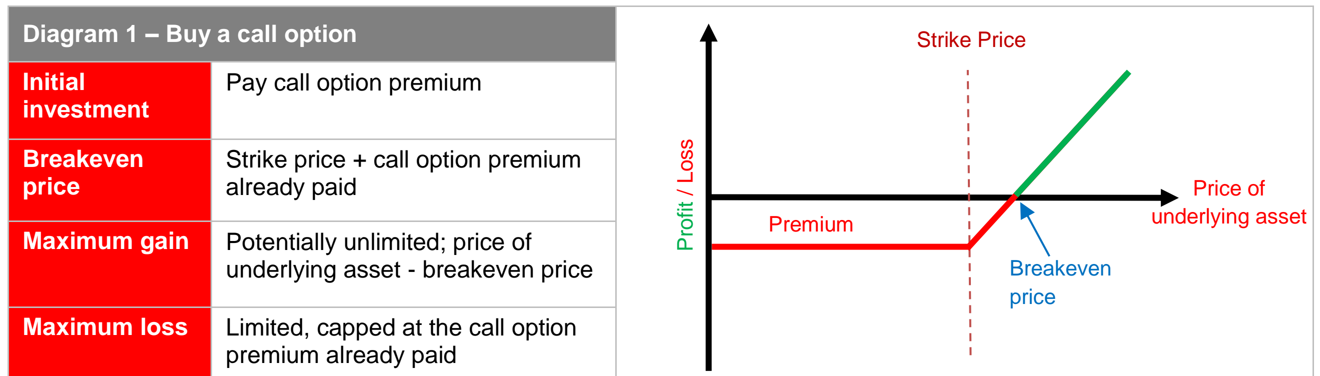

Diagram 1 – Buy a call option	
Initial investment	Pay call option premium
Breakeven price	Strike price + call option premium already paid
Maximum gain	Potentially unlimited; price of underlying asset - breakeven price
Maximum loss	Limited, capped at the call option premium already paid

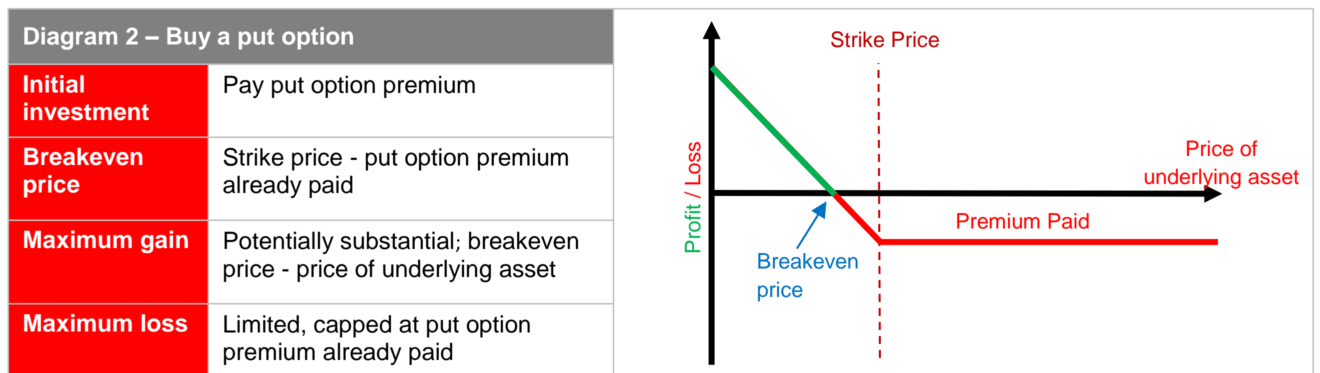

Diagram 2 – Buy a put option	
Initial investment	Pay put option premium
Breakeven price	Strike price - put option premium already paid
Maximum gain	Potentially substantial; breakeven price - price of underlying asset
Maximum loss	Limited, capped at put option premium already paid

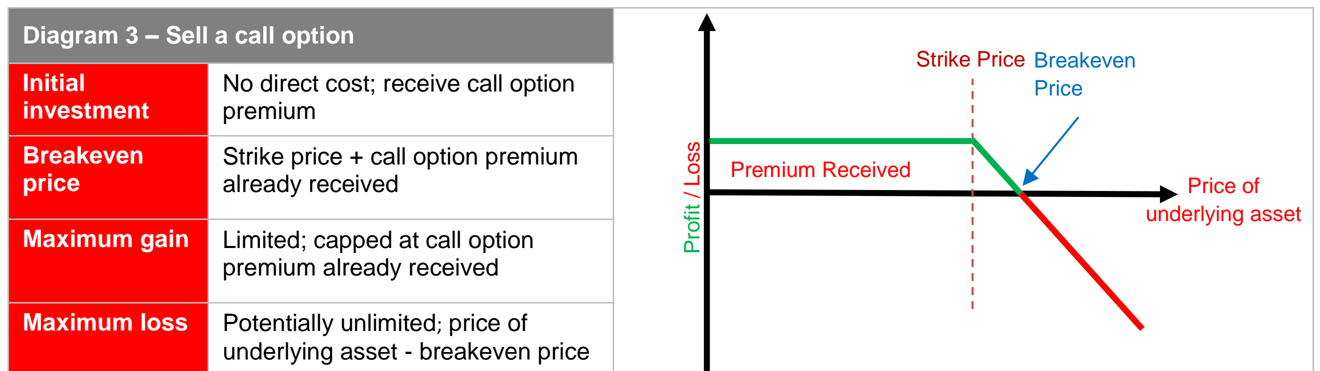

Diagram 3 – Sell a call option	
Initial investment	No direct cost; receive call option premium
Breakeven price	Strike price + call option premium already received
Maximum gain	Limited; capped at call option premium already received
Maximum loss	Potentially unlimited; price of underlying asset - breakeven price

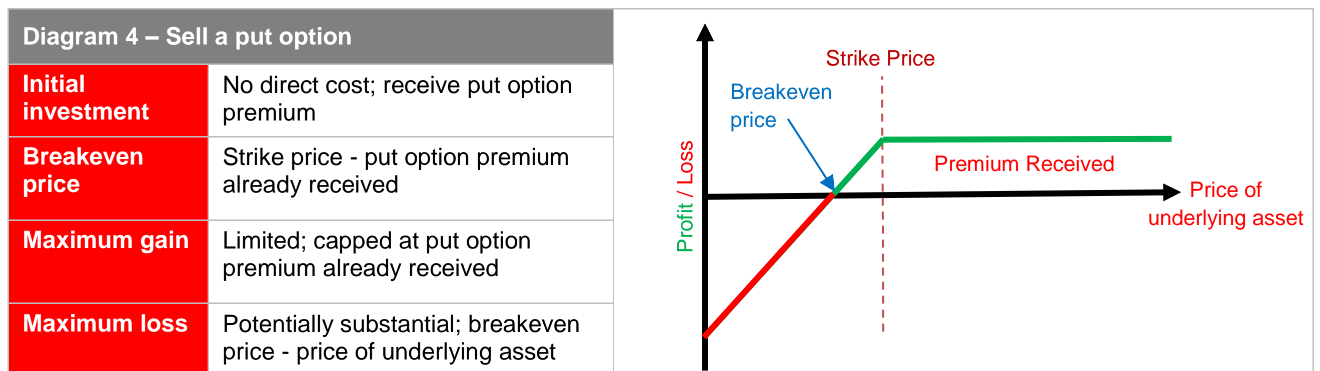

Diagram 4 – Sell a put option	
Initial investment	No direct cost; receive put option premium
Breakeven price	Strike price - put option premium already received
Maximum gain	Limited; capped at put option premium already received
Maximum loss	Potentially substantial; breakeven price - price of underlying asset

Scenario Analysis – Stock Options

Assuming a customer buys a call options contract of ABC company with specifications as follows. For simplicity, time/extrinsic value, brokerage and market charges are excluded in below example.

Basic specification	
Underlying	Stock of ABC company ("ABC stock")
Contract size	1000 shares per contract
Trade date	1 February 2019
Expiry date	29 March 2019
Current trading price (HKD)	95
Strike price (HKD)	100
Price of the options contract(HKD)	5
Breakeven price (HKD)	100 + 5 = 105
Premium (HKD)	5 x 1000 (contract size) = 5,000
Exercise Style	American Style

The below examples illustrate potential investment returns, based on different scenarios of ABC stock movement.

Scenario	1 February 2019	1 March 2019	29 March 2019 (Expiry Date)
ABC stock price movement	No Change	Above strike price	Below strike price
ABC stock price close at (HKD)	95	112	98
Strike price (HKD)	100	100	100
Price of the options contract (HKD)	5	12	0
Value of Options Contract (HKD)	Price of the options contract x Contract size		
	5,000 (5 x 1000)	12,000 (12 x 1,000)	0 ($0 x 1000)
Theoretical profit/loss (HKD)	Value of Options Contract – Premium		
	0 (5,000 – 5,000)	+7,000 (12,000 - 5,000)	-5,000 (0 - 5,000)
Return on investment (%)	Theoretical profit/loss / Premium		
	Not Applicable	+140% (+7,000 / 5,000)	-100% (-5,000 / 5,000)

Scenario Analysis – Index Options

Assuming a customer sells a 2-month put options contract of Hang Seng Index ("HSI") with basic specifications and position situation as follows. For simplicity, time value, brokerage and market charges are excluded in below example.

Basic specification	
Underlying	Hang Seng Index
Contract multiplier	HKD 50 per index point
Expiry date	The Business Day immediately preceding the last Business Day of the Contract Month
Exercise style	European Style
Position Situation	
Strike level	28,600
Current level	28,700
Initial margin (HKD)	87,633
Maintenance margin (HKD)	87,633
Price of the options contract (HKD)	100 index points (option premium) x HKD 50 = 5,000

The below examples illustrate potential investment returns, based on different scenarios of the HSI movement.

Scenario	1	2	3
Initial margin (HKD)	87,633		
Maintenance margin (HKD)	87,633		
HSI movement	Favourable	Slightly unfavourable	Significantly unfavourable
HSI at close	29,000	28,500	27,000
HSI movement spread	+1.05%	-0.70%	-5.92%
Customer's Mark to Market ("MTM") position (HKD)	(HSI at close - strike level) x Contract multiplier		
	0 (option is out-of-money)	-5,000 ((28,500 - 28,600) x 50)	-80,000 ((27,000 - 28,600) x 50)
Customer's margin position (HKD)	Initial margin + MTM position		
	87,633 + 0 = 87,633	87,633 + (-5,000) = 82,633 * Margin position is below maintenance margin, margin call is triggered	87,633 + (-80,000) = 7,633 * Margin position is below maintenance margin, margin call is triggered
Customer's unrealized position (HKD)	Premium received + MTM position		
	+5,000 (5,000 + 0)	+0 (5,000 + (-5,000))	-75,000 (5,000 + (-80,000))
Return on investment (%)	Customer's unrealized position / Initial margin		
	+5.70% (+5,000 / 87,633)	0% (0 / 87,633)	-79.88% (-70,000 / 87,633)

What you need to consider when trading options contracts?

- **Fitting your risk appetite**
  The risk of loss in options contract trading can be substantial. That is, you may sustain losses in excess of your initial margin. Please ensure options contract trading fits your risk appetite and refer to the Risk Disclosures section for more details.

- **Leveraged exposure**
  When buying an options contract, leverage can provide the potential to make a higher return from a smaller initial outlay than investing directly in the underlying asset. However, leverage usually involves more risks than a direct investment. Trading in options can allow you to benefit from a change in the price of the underlying asset without having to pay the full price of the underlying asset. Having said that, if the price moves in the wrong direction, your loss will also be magnified.

- **Time to decide**
  When you buy an options contract, the purchase/sale price for the underlying asset is locked in. You have the right, but not the obligation, to either buy or sell (as the case may be) the underlying asset for a certain period of time. This gives you until the expiry day to decide whether or not to exercise the options contract in accordance to the exercise style.

- **Directional view in a certain asset**
  If you expect there will be a rally in the price of a company's stock, you may consider buying a call option on that company's stock. Conversely, you can choose to buy a put option on that company's stock if you think the price of that stock will go down.

- **Protect your assets**
  You can use options to protect your assets from a fall in value. If you have a bullish view on your stock holdings but want to mitigate against potential loss, you can buy a put option to limit your downside while enjoying the full upside of holding stock in a cost-effective way. Using put options to protect your assets is a hedging strategy.

If you are in any doubt, you should obtain independent professional advice.

For more information about options, you can also visit

For product concepts
The Chin family (managed by the Investor and Financial Education Council) (https://www.thechinfamily.hk)

For products traded in HKSE and HKFE
Hong Kong Exchanges and Clearing Limited (http://www.hkex.com.hk)

Trading with HSBC Broking Securities (Asia) Limited ("HSBC Broking Securities") and HSBC Broking Futures (Asia) Limited ("HSBC Broking Futures")

HSBC Broking Securities and HSBC Broking Futures offers broking services covering a comprehensive range of exchange-traded options contracts trading at major exchanges around the world. Our team has rich expertise and proven success in helping sophisticated and experienced investors execute their investment strategies with the use of derivatives.

Comprehensive Range of Options Contracts

We support trading services in major futures markets around the world such as NYMEX, CME Group, ICE, Eurex Exchange, HKSE and HKFE, Osaka Securities Exchange ("OSE") and Singapore Exchange ("SGX"). A wide range of underlying assets is available, including stocks, benchmarks or indices, currencies, interest rates and commodities such as crude oil, copper, soybean, cotton and precious metals.

Simple Fee Structure

HSBC Broking Securities and HSBC Broking Futures charge a flat fee per contract for a majority of options contracts. Please contact our Relationship Managers for our Fees and Charges Schedule.

Please feel free to contact our Relationship Managers for more details.

Risk Disclosures

You should carefully consider whether options contract trading is suitable for you in light of your financial condition, experience and investment objectives. The following is a summary of some of the risks involving options contract trading. It is NOT an exhaustive list, and you are recommended to obtain independent professional advice before entering into any trade.

1. The risk of loss in options contract trading can be substantial. The risk of loss in financing a transaction by a deposit of collateral can be significant. You may sustain losses in excess of your initial margin funds, cash and other assets deposited as collateral with HSBC Broking Securities and HSBC Broking Futures.

2. You may be called upon at short notice to deposit additional margin funds. If the required margin funds are not provided within the prescribed time, your position may be liquidated without your prior consent. You will remain liable for any resulting deficit in your account. You should therefore carefully consider whether such trading is suitable in light of your own financial position and investment objectives.

3. Margin trading can involve a high degree of risk. You should familiarise yourself with the type of option (ie put or call) you contemplate trading and the associated risks. You should calculate the extent to which the value of the option must increase for your position to become profitable, taking into account the premium and all transaction costs.

4. As an options buyer, you may offset or exercise the options or allow the options to expire. The exercise of an option results either in a cash settlement or in the buyer acquiring or delivering the underlying asset. If the option is on a futures contract, you as a buyer will acquire a futures position with associated liabilities for margin. If the option expires worthless, you will suffer a total loss of investment, which will consist of the option premium plus transaction costs. If you are contemplating purchasing deep-out-of-the-money options, you should be aware that the chance of such options becoming profitable ordinarily is remote.

5. Selling an option generally entails considerably greater risk than purchasing an option. Although the premium received by the seller is fixed, you as the seller may sustain a loss well in excess of that amount. You will be liable for additional margin to maintain the position if the market moves unfavourably. You will also be exposed to the risk of the purchaser exercising the option and you will be obligated to either settle the option in cash or to acquire or deliver the underlying asset. If the option is on a futures contract, you as a seller will acquire a futures position with associated liabilities for margin. If the option is “covered” by your holding a corresponding position in the underlying asset or a futures contract or another option, the risk may be reduced. If the option is not covered, the risk of loss can be unlimited.

6. Certain exchanges in some jurisdictions permit deferred payment of the option premium, exposing the buyer to liability for margin payments not exceeding the amount of the premium. The buyer is still subject to the risk of losing the premium and transaction costs. When the option is exercised or expires, the buyer is responsible for any unpaid premium outstanding at that time.

7. Market conditions (eg illiquidity) and/or the operation of the rules of certain markets (eg the suspension of trading in any contract or contract month because of price limits or “circuit breakers”) may increase the risk of loss by making it difficult or impossible to effect transactions or liquidate/offset positions. If you have sold options, this may increase the risk of loss.

8. The amount of initial margin is small relative to the value of the options contract so that transactions are “leveraged” or “geared”. The lower the initial margin amount is used to open a position, the higher the gearing will be. The high degree of leverage which is often obtained in connection with margin trades can work against you as well as for you. The use of leverage can lead to large losses as well as gains.

9. The profit or loss in transactions in foreign currency-denominated contracts (whether they are traded in your own or another jurisdiction) will be affected by fluctuations in currency rates where there is a need to convert from the currency denomination of the contract to another currency.

10. You may be affected by any curtailment of or restriction on HSBC Broking Securities’ or HSBC Broking Futures’ capacity to trade in respect of open positions as a result of action taken by the Securities and Futures Commission, the Hong Kong Monetary Authority or other governmental or regulatory bodies under applicable rules or for any other reason. In such circumstances, you may be required to reduce or close your open positions with us.

Important Notes:

Before you trade, please read the Terms of Business which had been provided to you by HSBC Broking Securities and HSBC Broking Futures. In case of any discrepancy between the Terms of Business and this document, the Terms of Business shall prevail.

In the event of conflict or inconsistency between the English and Chinese versions of this document, the English language version of this document shall prevail for all purposes.

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