General Knowledge on Derivatives Products
衍生產品基本常識

Preface

There are different kinds of investment product in Hong Kong and many of them are contained derivative element. Therefore, understand what we are buying and the risks we are facing, relatively is more important than "How much we can earn from this investment". In this article, we will discuss some of the common derivative products in Hong Kong and the fundamentals relating to these instruments. We hope that audiences find this article to be useful and can give you a general knowledge to know more about derivatives, such as their nature, significant risk involved, etc. It is impossible to list all of the factors that may affect the performance and risks of each of these instruments. You **MUST** consult your professional investment advisor for further information before you invest.

序言

香港市場有許多不同種類的投資產品，其中許多都含有衍生元素。因此,熟悉我們所購買的產品和我們要面對的風險比"投資能夠為我們帶來多少收益"更為重要。在這篇文章中，我們將討論香港市場上一些常見的衍生產品和有關這些衍生工具基本常識。我們希望這篇文章能夠使讀者受益，瞭解更多有關衍生產品的基本知識，如他們的性質，涉及的重大風險等，為更深入的學習衍生產品打下基礎。羅列出所有能夠影響每只衍生工具表現和風險的因素是不太可能的，閣下在投資之前**必須**諮詢您的專業投資顧問以便獲得更深入的資訊。本問卷用以協助中國銀河國際證券(香港)有限公司及中國銀河國際期貨(香港)有限公司（統稱「銀河國際」/ 「我們」）了解您對衍生工具的認識，並評估您是否適合認購具有衍生工具的產品。

What is Derivative?

Derivative is a financial product whose value depends on, or derives from the value of another "underlying" asset. Futures, forwards, options, warrants, swaps, swaptions, structured notes are all examples of derivative products. Derivatives can be used for hedging, protecting against financial risk, or can be used to speculate on the movement of underlying asset, interest rates or the levels of financial indices.

什麼是衍生產品？

衍生產品是一種金融產品，其價值取決於或衍生於另外一個標的資產的價值。期貨，遠期，期權，認股權證，掉期，掉期期權，結構性票據都是衍生產品。衍生產品可用於套期保值，防範金融風險，或者可以用來根據標的資產、利率或各種金融指數的變動而進行投機。

Payoff Pattern

We can base on the payoff pattern of the derivative products to classify them into two types, they are **forwards** and **options**.

The payoff pattern of forwards is linear and symmetric. It means that the change in the value of the derivatives is in the same direction and proportion as the change in value of the underlying. For example, if Hang Seng Index moves up 1%, the near term futures contract on this index should also move up 1%. There will be a little bit deviation from 1% due to index composition expectations and changes in future dividend term structure and forward interest rates expectations.

The payoff pattern of options is non-linear and asymmetric. It means that the change in value of the derivatives is not in the same proportion and may not be in the same direction as the change in value of the underlying. Same as the above example, if Hang Seng Index moves up 1%, it doesn't mean the instrument hold by the investor should also be moved up 1%. It is depended on the types of the option (call or put), the status of the option (in-the-money, at-the-money or out-of-money), time-to-maturity etc.

盈利模式

根據盈利模式，我們可以將衍生產品分為兩類，**遠期**和**期權**。

遠期的盈利模式是線性和對稱的。這意味著，衍生產品的價值變化同其標的資產的價值變化是同向的，並且變化比例相同。例如，如果恒生指數上漲1%，以恒生指數為標的的近期期貨合約理論上也應上漲1%。但現實中，由於受指數成分股構成、未來股息期限結構變化和遠期利率的預期影響，上漲幅度可能會與1%有微許偏差。

期權的盈利模式是非線性和非對稱的。這意味著，衍生產品的價值變化與標的資產的價值變化可能是不同向的，且變化的比例不盡相同。如上述所講的例子，恒生指數如果上漲1%，並不意味著投資者所持有的衍生工具也上漲1%。這要取決於期權的類型（看漲期權或看跌期權）、期權的狀態（價內期權、等價期權或價外期權）、至到期日的時間等。

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Futures vs. Forwards

Futures is a kind of forwards contract. They are priced on the same way. The major difference is that futures contract is an exchange traded contract, where the Hang Seng Index Futures and H-shares Index Futures are an example of futures contracts traded on exchange. They have fixed terms for the contract size, length of the contract, expiry date etc. For those that are not traded on the exchange, they are called forward contracts. All these contracts traded via over-the-counter derivatives markets. Another difference is a minimum margin payment is required for the futures contract. The purpose of the margin payment is assured the investor has sufficient money to cover any possible trading loss. For the forward contracts, the actual payment would only be settled at the contract expiry date. In this sense, both parties are taking the counter party risks for each other.

期貨與遠期

期貨類似於遠期合約，他們以同樣的方式定價。兩者的主要區別為，期貨合約是在交易所買賣的合約，恒生指數期貨及 H 股指數期貨就是在交易所買賣的期貨合約的例子。期貨合約在合同的大小，條款和到期日等方面都有統一的標準。而那些不在交易所交易的合約被稱為遠期合約，遠期合約都在場外交易。另一個區別是期貨合約有支付最低保證金的要求，支付保證金的目的是確保投資者有足夠的金錢去彌補任何潛在的交易損失。而就遠期合約而言，實際支付只在合約到期日發生。從這個意義上說，雙方互相承擔對手方的風險。

Futures Terminology
期貨術語

Contract Size: Contract value of each futures contract and is predetermined by the exchange itself. For example, if investor wants to trade gold futures in Hong Kong, he can found out that the contract size offers by HKEx is 100 troy ounces per contract and HKMEx is 32 troy ounces.

合約大小： 每份期貨合約的合約價值是由交易所本身事先確定的。例如如果有投資者想投資黃金期貨，他/她會發現，由香港交易所所提供的合約，每張價值為 100 金衡盎司，而由香港商品交易所所提供的合約，每張價值為 32 金衡盎司。

Cost of Carry: The relationship between futures prices and spot prices can be summarized in terms of what is known as the cost of carry. This measures the storage cost plus the interest that is paid to finance the asset less the income earned on the asset

持有成本： 期貨價格和現貨價格之間的關係可以用持有成本來概括。持有成本是存儲成本加上持有金融資產需繳付的利息減去金融資產所產生的收入所得而得來的。

Expiry Date: It is the date specified in the futures contract. This is the last day on which the contract will be traded, at the end of which it will cease to exist.

到期日： 在期貨合約中指定的日期。這是該合約進行交易的最後一天這一天過後這個合約將被終止進行交易。

Front Month: The first expiration month in a series of contract month.
即月： 在一系列合約月份中的第一個到期結算的月份。

Futures price: The price at which the futures contract trades in the futures market.
期貨價格： 期貨合約在期貨市場的交易價格。

Initial Margin: The initial deposit make to the broker when open a new futures position whether long or short.
初始保證金： 當投資者進場建立期貨合約部位時，不論是長倉還是空倉繳納給經紀人的保證金。

Long position: Outstanding purchase position.
長倉： 多頭部位，未結算的買進期貨部位。

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Maintenance Margin:	The minimum amount of cash is needed to have in the trading account in order to maintain the outstanding position.
維持保證金：	投資者為了維持現有部位而必須保持其帳戶內的最低保證金金額。
Marking to market:	At the end of each trading day, the value of the derivatives portfolio in the investors' accounts are adjusted according to the daily settlement price of each outstanding contract in a process known as marking to market.
逐日盯市制度：	在每個交易日結束後，對投資者帳戶中尚未結算的衍生產品組合價值，以當日結算價為標的進行重新的價值評估。
Contract Multiplier:	It is used to compute the cash value of each futures contract. For example, the contract multiplier for Hang Seng Index Futures is HKD 50.00 per index point. Now the contract is trade at 16,000 point. The contract value for this contract will be HKD 800,000 (16,000 point x HKD 50.00).
合約乘數：	用以計算每個期貨合約的現金價值。例如，恒指期貨合約的合約乘數為每指數點 50 港元，如果一個恒指期貨合約現有的報價為 16,000 點，則此合約的一張合約價值為 80 萬港元（16,000 點 x50 港元）。
Open Interest:	Total outstanding long and short positions in the market.
空盤量：	在期貨市場上尚未結清的全部長倉和空倉的數量。
Short position:	Outstanding sales position.
淡倉：	尚未結清的空頭部位。
Spot price:	The price at which an asset trades in spot market.
現貨價格：	一項資產在現貨市場交易的價格。
Spread:	It can be defined as the futures price minus the spot price. There will be a different spread for each delivery month for each contract. Under normal circumstances, the spread will be positive. This reflects that futures prices normally exceed spot prices.
價差：	可以被定義為期貨價格減去現貨價格。期貨合同的每個交割月份都會有不同的價差。正常情況下，價差是正數，這反映了期貨價格通常高於現貨價格。
Tick Size:	Minimum price difference between bid and offer quotes.
最小價格波動值：	買賣價之間的最小價差。

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Options
Option essentially is a right but not an obligation for an option buyer to buy or sell certain amount underlying asset at a predetermined price on or before a specified date. As for the option seller, it has the obligation to sell or buy the underlying asset given the option is exercised by the option buyer. Option buyer has to pay an option premium to the option seller in exchange for that right. Within option products, we should know the difference between a "Call Option" and a "Put Option". The meanings of "American Style Option" and "European Style Option" and many other terms. You may feel confusing of them but don't let the names overwhelm you. Each of them has a specific definition when referring to the option trading. If you are feel interest to learn more about option, these terms will become familiar to you.

期權
期權實質上是一種權利而不是一種義務。一個期權合約的買方有權利在特定日期或在此日期之前以特定價格買入或賣出一定數量的標的資產，而期權合約的賣方則有義務在期權合約買方行使期權後將相關標的資產買入或賣出。期權的買方以支付期權費的方式換取權利。在期權產品中，我們應當知道"認購期權"和"認沽期權"之間的區別、"美式期權"和"歐式期權" 及許多其它術語的含義。你可能對這些名詞感到困惑，但不要被它們的名字嚇到。當這些術語與期權交易相關聯時，每個術語都有其特定的含義。如果你有興趣瞭解更多有關期權方面的知識，你需要熟悉這些術語。

Option Terminology
期權術語

American Style Option: An option contract that can be exercised at any time between the date of purchase and the expiration date.
美式期權: 可在到期日或之前任何一交易日行權的期權合約。

At-the-money: An at-the-money option (ATM) is an option that would lead to zero cash flow if it exercises immediately. An option on the index is ATM when the current index level equals the strike price (i.e. spot price = strike price).
等價： 等價期權指期權如果被行權時所產生的現金流為零。以一個指數期權為例，當當前指數點位和指數期權的履約價相同時（即現貨價格=行使價），這個指數期權處於實值狀態，即等價狀態。

Call Option: An option contract which gives the holder the right, but not the obligation, to buy a specified amount of an underlying asset at a specified price within a specified time in exchange for a paying a premium. The call option buyer hopes the price of the shares will rise by a specific date while the call option seller (or writer) hopes that the price of the shares will drop, remain stable, or rise by an amount less than their profit on the premium by the specified date.
看漲期權： 期權合約賦予持有人權利，但沒有義務，在特定時期內以協約價格購買指定數量的標的資產來做為支付期權費的補償。看漲期權的買方希望在某一特定日期前股票價格會上升，而看漲期權的賣方則希望在某一特定日期前股票價格會下降，保持穩定，或上升的幅度小於他們在期權費上的盈利。

Call Premium: The amount a call option costs.
看漲期權費： 看漲期權的成本金額。

Covered Call: A short call option position plus a long position in an underlying asset.
備兌認購期權： 賣出看漲期權的同時買入等值標的資產的長倉。

Covered Put: A short put option position against a short position in an underlying asset.
備兌認沽期權： 賣出看跌期權的同時賣出等值標的資產的淡倉。

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Credit Spread: The difference in value between 2 options, where the value of the short position exceeds the value of the long position.
信貸價差： 賣出期權所得到的溢價超過買入期權時所支付的溢價的差異。

Debit Spread: The difference in value between 2 options, where the value of the long position exceeds the value of the short position.
借記價差： 買入期權時所支付的溢價超過賣出期權所得到的溢價的差異。

Deep-in-the-Money: A deep-in-the-money call option has a strike price well below the current price of the underlying instrument. A deep-in-the-money put option has a strike price well above the current price of the underlying instrument. Both primarily consist of intrinsic value.
深度價內： 深度價內的看漲期權的履約價遠低於當前標的工具的現貨價格。深度價內的看跌期權的履約價遠高於當前標的工具的現貨價格。兩者都有內在價值。

European Style Option: An option contract that can only be exercised on the expiration date.
歐式期權： 只能在到期日行權的期權合約。

Exercise: Implementing an option's right to buy or sell the underlying security.
行權： 執行期權的權利買入或賣出標的股票。

Exercise Price: The specified price on an option contract at which the contract may be exercised, whereby a call option buyer can buy the underlying asset or a put option buyer can sell the underlying asset. It also known as strike price.
行權價： 指合約可以被行權時的特定價格，即看漲期權的買方能夠購買標的資產或看跌期權的買方可以出售標的資產時的期權價格。它也被稱為履約價格。

Expiration Date: The last day on which an option may be exercised.
截止日期： 可行使購股權的最後一天。

In-the-Money: A “call” option is in-the-money if the strike price is less than the market price of the underlying asset. A “put” option is in-the-money if the strike price is greater than the market price of the underlying asset.
價內： 如果履約價低於標的資產的市場價格,看漲期權就處於實值狀態，即價內狀態。如果履約價高於標的資產的市場價格,看跌期權就處於實值狀態，即價內狀態。

Intrinsic Value: The difference between the exercise price of the option and the current value of the underlying instrument (spot price). If the option does not have positive monetary value, it is referred to as out-the-money.
內在價值： 期權行權價格和基本工具的當前值（現貨價格）之間的差異。如果該期權沒有正面的貨幣價值，它處於虛值狀態，即價外狀態。

Naked Option: An option written (sold) without an underlying hedge position.
無保護期權： 是指沒有對沖標的資產部位的看漲期權或看跌期權。

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Out-of-the-Money: A call option is out-of-the-money if its exercise or strike price is above the current market price of the underlying security.
A put option is out-of-the-money if its exercise or strike price is below the current market price of the underlying security.
If an option is out-the-money at expiration, its holder will simply "abandon the option" and it will expire worthless.

價外： 如果行權或履約價高於標的股票當前的市場價格，看漲期權就處於虛值狀態，即價外狀態。
如果行權或履約價低於標的股票當前的市場價格，看跌期權就處於虛值狀態，即價外狀態。
如果一個期權在到期時還出於虛值狀態，其持有人只能“放棄期權”，期權將變得毫無價值。

Put Option: An option contract giving the owner the right, but not the obligation, to sell a specified amount of an underlying security at a specified price within a specified time. The put option buyer hopes the price of the shares will drop by a specific date while the put option seller (or writer) hopes that the price of the shares will rise, remain stable, or drop by an amount less than their profit on the premium by the specified date.

看跌期權： 期權合約賦予持有人權利，但沒有義務，在特定時期內以協約價格賣出指定數量的標的資產。看跌期權的買方希望在某一特定日期前股票價格會上升，而看跌期權的賣方則希望在某一特定日期前股票價格會下降，保持穩定，或下降的幅度小於他們在期權費上的盈利。

Straddle: A position consisting of a long (short) call and a long (short) put, where both options have the same strike price and expiration date.

跨式期權組合： 指一種包含相同行使價和到期日的看漲期權和看跌期權的組合。

Strangle: A position consisting of a long (short) call and a long (short) put where both options have the same underlying, the same expiration date, but different strike prices. Most strangles involve OTM options.

異價跨式組合： 指包含不同行使價但相同標的資產和到期日的看漲期權和看跌期權的組合。多數異價跨式組合都涉及等價期權。

Synthetic Long Stock: A short put and a long call.
合成正股長倉： 同時沽出看跌期權和買入看漲期權。

Synthetic Short Stock: A short call and a long put.
合成正股短倉： 同時沽出看漲期權和買入看跌期權。

Time Decay: The amount of time premium movement within a certain time frame on an option due to the passage of time in relation to the expiration of the option itself.

時間衰減: 期權在一定的時期內隨著時間的流逝而導致的時間溢價價值的變動，這種變動取決於期權距離到期的時間。

Time value: The price of an option less its intrinsic value. An out-of-the money option's worth consists of nothing but time value.

時間價值: 期權的價值與其內在價值之差。價外期權的價值沒有內在價值只有時間價值。

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Volatility: It measures the underlying assets tendency to move up and down in price, based on its daily price history over the specified time period. Mathematically, volatility is the standard deviation of the percentage change in daily price. There are two kinds of volatility:
Historical Volatility - statistical measurement of past price movements.
Implied Volatility - measures whether option premiums are relatively expensive or inexpensive. Implied volatility is calculated based on the currently traded option premiums.

波動性： 在特定的時期，根據期權每天的歷史價格，以價格衡量標的資產向上或向下的趨勢。從數學的角度來說，波動是每日價格百分比變化的標準差。有兩種波動性：
歷史波動性(historical volatility)-期權歷史價格波動的統計測量。
隱含波動性(implied volatility)-衡量期權溢價是否相對昂貴或者便宜。隱含波動性是基於現有期權交易溢價計算的。

Writer: An individual who sells an option.
賣方： 賣出期權的個體。

Warrants
Warrants are the most common derivative products with options features in Hong Kong. It is a kind of securities and can be traded in the exchange. We can found there are two different types of warrants in the market. They are Equity Warrant (Company Warrant) and Derivative Warrant.

Equity warrant is a call option issued by an issued company giving the warrant holder a right to acquire new shares in that firm or any of its subsidiaries. Usually the exercise price is higher than the market price at the time of issuance. When warrant holder exercises this right, the firm has to issue new shares for them (the total shares outstanding increases). Derivative warrant is generally issued by third party such as investment bank. They can be either a put or call warrant. The underlying asset can be a single stock, a basket of stocks, an index, a currency, a commodity etc. Most of them are settled in cash.

權證
權證是香港最常見的具有期權性質的衍生工具，他是一種可以在交易所交易的證券產品。香港交易市場中的權證分為兩類，分別是股票權證（公司認股證）和衍生權證。

股票權證是由公司發行的看漲期權，給予權證持有人買入該公司或該公司子公司的新股份的權利，通常行權價都會較發行時的市場價格高。當權證持有人行使權利時，公司必須向持股人發行新股份（全部已發行的股份數量便會增加）。衍生權證一般由協力廠商機構發行，例如投資銀行，它們可以是看漲或看跌權證，目標資產可以是單一的股票、一籃子股票、指數、貨幣、商品等，大部份衍生權證都是以現金結算的。

Applications of Derivative
There are many applications of derivatives. They are usually used for the following four purposes:
- Yield Enhancement
- Access to Different Asset Classes;
- Leverage Effect; and
- Long/Short Exposures & Risk Hedging

衍生工具的應用
衍生工具有很多用途，一般為了實現以下目的：
- 提升投資收益
- 參與不同資產類別
- 杠杆效應
- 做多／做空敞口和風險對沖

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Yield Enhancement
If an investor anticipates the stock market will not drop significantly in the coming month, and even if certain stocks drop below a certain price, the investor is willing to buy those stocks at that price for investment.

The investor can use the equity-linked note (ELN) by selling a put option or selling the stock option in the exchange directly. The main difference is the investor can base on their investment needs to customize the strike level, contract size and the expiry date of the contract when he invests in the ELN.

On the contract expiry date, if the underlying stock does not fall below a strike level, the investor can enhance his/her investment yield by receiving the option premium and he/she does not have to actually buy the stock. But if the market drops, then the investor needs to buy the stock at a price higher than the market price, and if the stock price falls sharply, there will be a greater risk of loss.

提升投資收益
如果投資者預期股票市場將會在未來數月不會有大幅度下跌，即使一些特定股票低於特定價格時，投資者仍然願意以該特定價格，買入該些股票作為投資。

該投資者可以利用股票掛鉤票據(ELN)，在交易市場直接賣出看跌期權或賣出股票期權，其中主要的差別是，投資者投資ELN時，可以基於自身的要求，定制執行價格水準、合約大小和合約到期日。

如果合約到期日，該標的股票並沒有下跌至低於執行價格水準，投資者可以無須買入該股票，通過獲取期權金，提高投資收益。但當市場下跌時，投資者便需要以高於市場的價格買入該股票，如果股票價格大幅下跌的話，投資者便會面臨重大虧損的風險。

Access to Different Asset Classes
“Access to Different Asset Classes” means that investor can participate in, or buy and sell, different assets like stock and foreign currency through derivatives. As an example, the "A-share" market in Mainland China is a market that foreigners could not participate in; however, through Synthetic ETFs, investors can indirectly participate in the "A-share" market. These Synthetic ETFs make use of derivatives to track (or replicate) the performance of a market index as the main investment objective. Through the Synthetic ETFs, although investor cannot hold "A" shares directly, the performance of "A" shares can be reflected by the Synthetic ETFs the investor holds.

參與不同資產類別
“參與不同資產類別”即代表投資者可以參與或買入賣出不同類別的資產，例如可以通過衍生工具持有股票和外匯敞口。舉個例子，海外投資者是無法參與中國大陸的“A股”市場，但是通過合成ETF，投資者便可以間接參與“A股”市場，該些合成ETF的主要投資目的是利用衍生工具追蹤（或複製）市場指數的表現，通過持有合成ETF，投資者儘管未能直接持有“A股”，但是仍可以通過持有合成ETF 獲取“A股”表現。

Leverage Effect
If an investor wants to increase his participation in the market when a clear market trend is found, a very aggressive approach can be achieved by buying warrants with the same amount of investment. However, the risk taken by the investor will be very high!
For example, an investor hopes to leverage up the exposure on a stock. The underlying stock of a call warrant is $100 per share at current market level, and a three months maturity call warrant of this stock, with strike $100, indicating at $0.5 currently. Assume the conversion ratio of this derivative warrant to stock is 10:1 and the total investment is $100,000.

Strategy A (stock):	Purchase 1000 shares
Strategy B (warrant):	Purchase 200,000 shares of the call warrant with strike $100.

杠杆效應
當投資者發現一個明確的市場趨勢，如果他想更多參與市場，他可以買入與其投資數量相同的權證，然而，投資者所承擔的風險將非常高！

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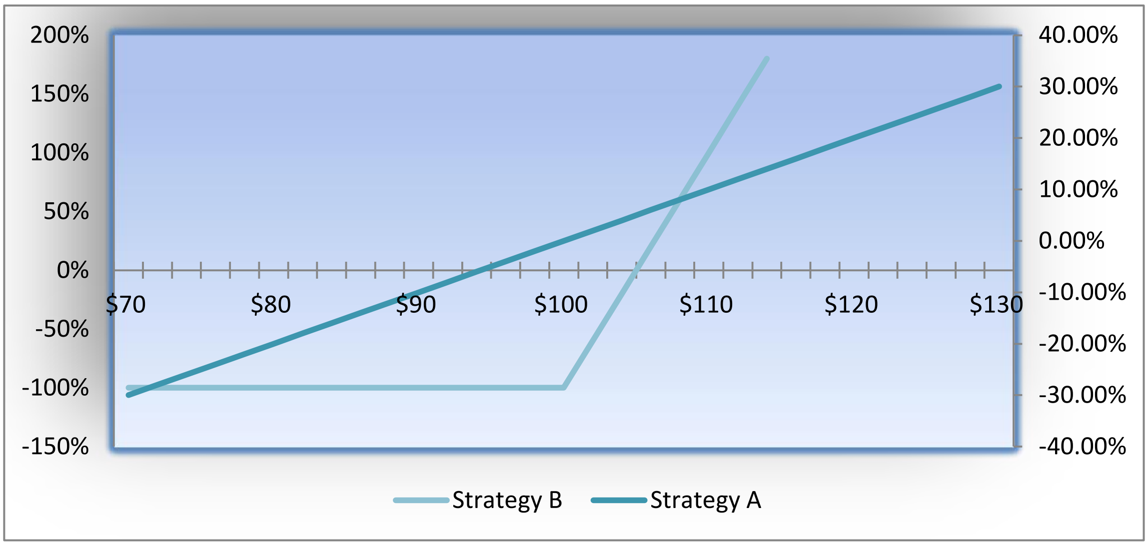
例如，投資者想以杠杆的方式提升某一股票的敞口，某一看漲權證中標的股票的市場價格為每股 100 港元，一個該股票 3 個月到期，而執行價格為 100 港元的看漲權證現時價格是 0.5 港元。假設該股票的衍生權證的轉換比例為 10:1，總投資金額為 100,000 港元。

策略 A (股票): 買入 1000 股股票
策略 B (權證): 買入 200,000 股執行價格為 100 港元的看漲權證

Possible payoff and rate of return of two portfolios during this three months investment:
在這3個月內兩個組合可能的投資收益和的回報率：

Price / Portfolio	$85	$90	$95	$100	$105	$110	$115
A	$85,000	$90,000	$95,000	$100,000	$105,000	$110,000	$115,000
B	$0	$0	$0	$0	$100,000	$200,000	$300,000



Observation:
From the above example, it is found that trading in warrant can achieve:
The slope of payoff of Strategy B is much steeper than Strategy A. It can be found that Strategy B is much more sensitive to the change of price of the underlying stock than Strategy A. This leverage effect can help the investors increase their participation in bullish market.
Conversely, if the value of underlying stock remains unchanged until the warrant expire (on its initial value $100). The value of Strategy B falls precipitously to zero, the rate of return will equal to –100%.

觀察結果:
從上面的例子，我們可以發現通過權證交易可以實現如下目的：
策略B收益的斜率是遠遠高於策略A收益的斜率，可以發現策略B對標的股票價格的變動較策略A更為敏感，這個杠杆效應可以幫助投資者在牛市時增加參與度。
相反，如果目標股票的價值保持不變，直到權證到期（其初始值100港元)。策略 B價值急劇下降到零，回報率會等於-100%。

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Long/Short Exposures & Risk Hedging
If purchasing stock seems risky, investor can try to use the "put" to hedge the downside risk. Combining the feature of the put and stock, investor can have a better protection against adverse market situation. It can provide a good strategy when the investor wants to keep on holding the stock for reasons.

For example, if the market price of a stock is at $25 per share, a six months maturity put warrant of this stock, with strike $23, indicating at $0.10. Investor decides to buy 4,000 shares of the stock with the total investment in stock $100,000. Also, buy 40,000 shares of the put warrant.

Strategy A (stock): Purchase 4,000 shares
Strategy B (stock + warrant): Purchase 4,000 shares of underlying stock and 40,000 shares of put warrant for $4,000.

做多／做空敞口和風險對沖
如果購買股票風險過大，投資者可以嘗試使用"看跌權證"對沖下跌風險。結合看跌權證和股票的特徵，投資者可以在不利市場形勢中獲得更好的保護。當投資者因某種原因要繼續持有該股票，它可以提供一個很好的避難策略。
例如，如果某股票的市場價格是每股25美元，一個該股票6個月到期，而執行價格為23港元的看跌權證的價格現時是0.10港元。投資者決定買入4000股股票，該股票的總投資為100,000港元。此外，買入該股40,000股的看跌權證。

策略 A (股票): 買入 4,000 股股票
策略 B (股票＋權證): 買入 4,000 股股票和買入該股 40,000 股的看跌權證

Possible payoff and rate of return of two portfolios during this six months investment:
在這6個月內兩個組合可能的投資收益和的回報率：

Price / Position	$17	$19	$21	$23	$25	$27	$29
Holding stock	$68000	$76,000	$84,000	$92,000	$100,000	$108,000	$116,000
Holding warrant	$20,000	$12,000	$4,000	-$4,000	-$4,000	-$4,000	-$4,000

Price / Position	$17	$19	$21	$23	$25	$27	$29
A	-32%	-24%	-16%	-8%	0%	+8%	+16%
B	-15.38%	-15.38%	-15.38%	-15.38%	-7.69%	-0%	+7.69%

Observation:
From the above example, it is found that trading in warrant can achieve the following:
Put warrant can be used to hedge a long stock position when the share price falls. The corresponding values of a put warrant rises will offset the loss comes from the stock. It can help investors to preserve the value of a portfolio in a bearish market or during the uncertain period instead of selling the shares and missed a potential rally.

觀察結果:
從上面的例子，我們可以發現通過權證交易可以達到如下目的：
當股價下跌時，看跌權證可用於對沖多頭的股票敞口。看跌權證價格上漲的相應價值將抵消股票的損失。它可以幫助投資者在熊市或市場不明朗時，維持投資組合的價值，並繼續持有而不是出售的股票，避免錯過了一個股票潛在反彈的機會。

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Callable Bull / Bear Contracts

Besides derivative warrant, CBBC is one of the most popular derivative products we can be traded in Hong Kong. Same as other derivative instrument, its value is determined by the performance of an asset it is linked to. It also provides investors with a leveraged investment in underlying assets, which can be a single stock, or an index.

CBBC has two types of contracts. They are Callable Bull Contract and Callable Bear Contract. By investing in a callable bull contract, investors are bullish on the prospect of the underlying asset and intend to capture its potential price appreciation. Conversely, investors buying a callable bear contract are bearish on the prospect of the underlying asset and try to make a profit in a falling market.

CBBC is typically issued at a price that represents the difference between the spot price of the underlying asset and the strike price of the CBBCs, plus a small premium (which is usually the finance cost). The strike price can be equal to or lower (bull)/higher (bear) than the call price. The call price is also referred to as "stop-loss". If the underlying asset’s price reaches the call price at any time prior to expiry, the CBBC will expire early. The issuer of the CBBC must call the CBBC and trading of the CBBC will be terminated immediately. Such an event is referred to as a Mandatory Call Event. However, CBBC will expire at a predefined date when the Mandatory Call Event never occurs.

可贖回牛/熊證

除了衍生權證外，可贖回牛/熊證是我們可以在香港買賣的最流行的衍生產品之一。其他衍生工具一樣，它的價值取決於和它相關聯的資產的表現。它還向投資者提供關於標的資產的杠杆投資，標的資產可以是單一股票或指數。

可贖回牛/熊證有兩種類型的合同，即可贖回牛證和可贖回熊證。投資者購買可贖回牛證，表示其看好標的資產的前景並打算捕獲其潛在的價格升值所帶來的收益。相反，投資者購買可贖回熊證，表示其看淡標的資產的前景，並試圖在市場下跌時獲利。

可贖回牛/熊證的定價為標的資產的現價與可贖回牛/熊證履約價之間的差別，再加上一個小的溢價（通常是融資成本）。履約價可以等於或低於（牛證）/高於（熊證）贖回價。贖回價也被稱為“止損”價。如果標的資產價格在到期前的任何時間達到贖回價，可贖回牛/熊證將提前到期。可贖回牛/熊證的發行人必須贖回牛熊證，可贖回牛/熊證的交易將立即終止，這被稱為強制性贖回事件。不過，如果強制性贖回事件沒有發生過，可贖回牛熊證將會在預定日期屆滿後過期。

Key Risks Associated with Derivatives

The key risks involved in derivatives, including:

1. Counter party Risk

When the derivative instruments are issued by third-parties, such as listed companies or financial institutions, if the issuing party encounters financial problems and this leads to a decrease in their credit rating, or if they collapse because of solvency problems, the derivatives’ values will be affected and may even lose all value.

2. Market Risk

Derivatives’ prices depend on the value of their underlying assets. Normally, fluctuations in the underlying assets’ prices will affect derivatives’ prices directly. This is the Investment Risk of the Underlying Asset.

3. Liquidity

There may be a risk that the derivatives cannot be easily sold or converted into cash with low cost. Before the expiry, some derivatives may be harder to sell and convert into cash. If it is not possible to sell them, investor will have to wait until the derivatives expire before he/she can get his/her funds back.

4. Interest Rate Risk

Interest rate and the values of all derivative products are closely related. Any derivative will ultimately be exchanged for an “asset” and “money”, or exchanged between two currencies. The fact is that "money" is necessarily linked to interest rates; therefore, interest rate changes will definitely affect the values of derivative products.

5. Leverage Risk

Although derivative warrants may cost a fraction of the price of the underlying assets, a derivative warrant may change in value more or less rapidly than the underlying assets. In the worst case the value of the derivative warrants may fall to zero and holders will lose their entire purchase price.

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與衍生工具相關的主要風險
涉及衍生工具的主要風險，包括：
1。對手方風險當衍生工具的發行方是協力廠商，如上市公司或金融機構，如果發行方遇到財務問題，並導致發行方的信用評級下降；或者如果他們由於償付能力問題而倒閉，衍生工具的價值將受到影響，甚至可能失去所有的價值。

2。市場風險
衍生產品的價格取決於標的資產的價值。通常情況下，標的資產的價格波動將直接影響衍生產品的價格，這是標的資產的投資風險。

3。流動風險
指衍生產品可能很難出售或以低成本轉換成現金的風險。一些衍生產品在到期之前，可能難以出售和轉換成現金。如果不能賣掉這些衍生產品，投資者在能夠拿回他/她的資金之前，不得不等待直到衍生產品到期為止。

4。利率風險
利率及所有衍生產品的價值是密切相關的。任何衍生產品最終會被交換為“資產”和“錢”，或在兩種貨幣之間轉換。事實是，“錢”是必然和利率相聯繫，因此，利率的變化肯定會影響衍生產品的價值。

5。杠杆風險
雖然衍生權證的價格可能只是標的資產價格的一小部分，衍生權證價值的變化速度可能會比標的產品價值的變化速度要快或要慢。在最壞的情況下，衍生權證的價值可能會下降到零，持有人將失去他們的整個購買價格。

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Client's Declaration

I/We, the undersigned, hereby certify, declare and acknowledge that I/we fully understood the contents of the "General Knowledge on the Derivatives Products" on the derivatives' nature, types, applications together with their related risk disclosures statements in the language of my/our choice (English or Chinese). I/We was/ were invited to read carefully the "General Knowledge on the Derivatives Products" and the related risk disclosures statements, and to ask questions and take independent advice if I/We so wished.

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Signature(s) of Client(s) / 客戶簽署: ______________________ Date / 日期: ______________________

Name of Client / 客戶姓名: ______________________ Account No./ 帳戶編號: ______________________

*Please use the signature(s) on file with us.
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