

Knowledge of derivatives products

Derivative products are getting more popular as investment instruments. Some of you may have heard about derivative products from the newspaper or media or through the banks. In this video we will introduce common types and use of derivative products illustrate their payoff dynamics through examples and highlight common features, risks and other important points to consider before investing in derivative products or products that may involve derivatives.

Introduction of derivatives

A financial derivative is a contract between two or more parties with its price dependent upon or derived from one or more underlying assets. Fluctuations in the underlying asset will affect the derivatives' value. The most common underlying assets include stocks, currencies, interest rates, commodities and market indices.

They are all major types of derivative products, some are traded on the Stock Exchange, while others are offered by Banks or Financial Institutions. Examples of derivative products that are traded on the Stock Exchanges include warrants. In Hong Kong, they are all listed in the Stock Exchanges with securities code starting with 1 or 2. Callable Bull/ Bear Contract (CBBC) in Hong Kong, they are all listed in the Stock Exchanges with securities code starting with 6. Synthetic ETF such as 2823, FTSE A50 China Index ETF. Index Futures and Options, Exchange Traded Note (ETN). Examples of products offered by banks or other financial intermediaries that may involve derivatives included Structured Investment Deposit, Dual Currency Deposit or Deposit Plus, Equity Linked Investments, Structured Notes and Unit Trust with the use of derivatives specified in the investment objective.

As derivative products may have special features and risks that are different from other investments. Before deciding to invest, you should carefully read the offering documents, make sure you fully understand the features and risks of the product, consult your personal financial advisor if in doubt.

Common use of derivative products

So why do investors invest in derivative products? Traditional investment provides returns only when the assets appreciate. Derivative products allow customers to enjoy potential gain even under stable or bearish market. As derivative products can have pay off structure to match different market views. Some derivative products provide leverage which magnify gains and losses. There are derivative products that provide 2 times, 5 times, 10 times or more return or loss base on the performance of the asset. By investing in these derivatives products, investors can earn a potential return higher than direct investment within a short period of time. Other than retail investors, fund managers also invest in derivatives with an aim to enhance return, to invest in restricted markets, such as the China A shares, or to control the risk exposure to changes in the asset price.

Let us now go through some examples of derivative products to illustrate the basic features of derivatives. The first example is call option. An investor has a bullish view on stock. He pays an option premium of one dollar to purchase one call option of stock B. In return he receives a right or obligation to buy a share of Stock B at 100 dollar on the maturity date of the call option. Let's look at the payoff to the investors on the maturity date. If the market price of Stock B is at 120 dollar, which is higher than 100 dollar, investor will exercise the right to buy Stock B from the financial institution at 100 dollar. Again will be the difference between the market price and 100 dollar minus the cost 1 dollar for buying the call option. In this example, investor will gain 19 dollar.

If the market price of stock B is at 100 dollar, investor will not exercise the right to buy stock B from the financial institution as he can buy asset from the market at the same price. His loss will be the initial 1 dollar investment for buying the option.

If the market price of stock B is at 80 dollar, which is below 100 dollar, investor will not exercise the call option. His loss will be the initial 1 dollar investment for buying the option. Examples of products involving call option include call warrant, CBBC, synthetic ETF traded on the Stock Exchanges, Principal protected structured investment deposit and structured notes, Guaranteed funds, Open-end funds that invest in derivatives.

And now the example of derivatives product is selling a put option. For example, an investor places a structured deposit and backed with selling a put option. In fact, investor has sold a put option to the bank giving the bank the right to convert his deposit to Asset X at a pre-set price on the maturity date. If the price of Asset X goes down, in return investor receives a higher yield on deposit that is fixed premium from selling the option plus normal interest on the deposit component. If price of Asset X remains the same or increases, investor gets the higher yield on the deposit. If the price of Asset X drops, investor's deposit and interest will be converted to Asset X at the pre-set price because the price has gone down and is lower than the pre-set price. He may suffer a loss if he immediately sells Asset X at market price. Examples of products that involve selling a put option include equity linked investment, equity linked notes, equity linked deposit offered by Banks; structured investment deposit, dual currency deposit or deposit plus, structured funds, open-end funds that invest in derivatives.

Next is an example of a forward contract, which is an agreement to buy or sell an asset at a certain future time for a certain price. For example, an investor wants to buy Asset X one year from now at one million dollar and is worried that the price of Asset X will appreciate to above one million dollar. A financial institution owns Asset X and is happy to sell it one year later at one million dollar. The two parties enter into a forward contract with each other and agree a sell price at one million dollar for Asset X in one year. At the end of one year, investor will buy Asset X from the financial institution at one million dollar regardless of the market price of Asset X. If the market price of Asset X is 1.2 million dollar, investor can make the profit of 0.2 million dollar by immediately selling Asset X in the market at 1.2 million dollar. If the market price of Asset X is Hong Kong dollar 1 million, investor makes no profit or loss. If the market price of Asset X is 0.8 million dollar, investor may incur a loss of 0.2 million dollar if he immediately sells Asset X at market price of 0.8 million dollar. Examples of products that involve forward contract include FX forward contract, Renminbi non-deliverable forward, unit trusts that invest in derivatives. There are also futures contracts with similar concept as forward contract but they are traded on the exchange with standardized features. Examples include index futures, stock futures.

Another example is SWAP, where two parties agree to exchange one stream of cash flow against another. In this example, an investor has taken a floating rate loan and he is paying floating rate interest of HIBOR plus 1.5% per annum. But he wants to pay fixed interest rate for better cash flow management. He enters into interest rate swap with the bank. Investor pays a fixed rate of 2% per annum on the notional principal of one million dollar to the bank. The bank pays back a floating rate of HIBOR plus 1.5% per annum which investor can use to make the interest payment for the floating rate loan. Effectively investor has transformed the floating rate interest payment to fixed interest rate payment. Examples of products that involve SWAP contract include synthetic ETF, guaranteed funds, unit trusts that invest in derivatives.

From the examples we can see there are both benefits and risks associated with derivative products.

Popular features and risks of unlisted derivative products

There are many derivative products in the market with different features. You should understand the features and consider whether the features are suitable for you when making investment decisions on derivative products. We will introduce a few popular features here.

A product can have an autocall feature. It means the product can be early terminated at 100% of principal during the investment period. If the product is autocall, you may not be able to enjoy the same return when re-investing money in other investments. Some products have an "Airbag" feature with a cushion level defines a product purchase, which is usually set with a wide buffer against the initial price of the underlying such as 50 to 70% of initial price of the underlying. The issuer will monitor whether the price of the underlying has dropped to or below the cushion level during the investment period. If the price of the underlying has never dropped to or below the cushion level, you can receive cash dividend and 100% of the principal at maturity. If the price of the underlying has dropped to or below the cushion level during the investment period and it performs against expectation upon maturity, you may suffer a loss.

A derivative product can have a leveraged or geared payoff, which means the return or loss will vary more than direct investment. For example, if the gearing ratio is three, then a one dollar change in the underlying value will result in a 3 dollars gain or loss in the derivative product. Investor can incur big loss if the underlying moves unfavorably. The higher the leverage, the higher the risk. Potential loss can exceed 100% of the principal. In case the underlying moves unfavorably and is lower than the pre-set price at maturity, investors need to select the settlement option at maturity: 1) Physical delivery of underlying such as equity of foreign currency converted at the pre-set price which is higher than the current market price or 2) Settle the loss in cash at the current market price. You should consider your view on the underlying and your liquidity needs when deciding on the settlement option. If you have sufficient liquidity to hold the stock and have a positive view on the stock's future performance, you can choose physical settlement and wait for the price to rebound. If you are bearish on the underlying and would like to exit the market, you can select to settle the loss in cash. As the current market price is lower than the pre-set price, loss will be realized immediately.

Important notes on derivative products

You should pay attention to the following important notes before deciding to invest in any derivative products. Many derivative products are not principal protected. You could lose all of your investment. Most derivative products are packaged as deposit, note or debenture, but they are not equivalent to normal time deposit, note or debenture and have very different risk and reward relationship. Value of derivative product is linked to the performance of the underlying asset. Product is subject to the market risk of the underlying asset. You should be familiar with the underlying. You should research information of the underlying or request the distributor to provide such reference information. Only invest if the product matches your view of the underlying. If the issuer defaults or becomes insolvent, you may get nothing back and the potential maximum loss could be 100% of the investment amount. Ask the distributor about the issuer of the derivative product. Only purchase the products if you trust the creditworthiness of the issuer. If the counterparty of the derivative defaults or becomes insolvent, you may lose a large part or all of your investment. Payoff of the product may involve more than one condition depending on the payoff formula that derivative products make change more rapidly or less rapidly than that of the underlying asset. Make sure you understand the payoff and the return dynamics. Most unlisted derivative products offer infrequent dealing. You will not be able to sell the product at any time freely. Make sure you have sufficient liquid emergency funds and consider your liquidity needs on investment before deciding to invest. If you sell the product before the scheduled maturity, you may receive an amount substantially less than the initial investment amount. The products are not covered by the Investor Compensation Fund or Deposit Protection Scheme. Make sure you understand the risks specific to individual derivative product before purchasing. Consult your personal financial advisor if in doubt.

Summary

This video has covered the general information about the derivative market includes definition of derivatives, examples of derivative products traded on the stock exchange and offered via banks; common use of derivatives; examples to illustrate how basic derivative products work such as call option, put option, forward and Swap; popular features of unlisted derivative products and their associated risks such as autocall, airbag (also known as “Knock-in Event”), leverage and physical or cash settlement; general risk factors and important points to consider before subscription to any derivative products.

Before you invest in any derivative products, please make sure you fully understand the features and risks of the derivative product, and consult your personal financial advisor if you have any questions.