

Derivatives

General information

Derivative instruments, such as options, forwards, futures, etc., is a contract between two or more parties to buy or sell underlying assets including equities, bonds, commodities, currencies, price indexes etc. Derivative contract may or may not include delivery of the underlying asset.

Derivative instruments are financial contracts which value are tied to or derived from an **underlying asset**.



Value

Derivative instruments may be used to:

neutralise the risk of an **unfavourable movement in the price of an asset** (also known as **hedging**)

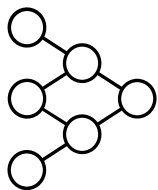
boost the yield of an investment, **using less capital than would be required to produce the same yield in an investment in the underlying asset**

take advantage of price difference between various markets (**arbitrage**)

The basis of an investment decision in derivative instruments is the expectation of a specific future development in the price of the underlying assets over a certain period of time. The investor should therefore have a clear picture of the expected market movements. In addition, the investor must have a clear understanding of the **purpose of the investment** (whether this is hedging, highly-g geared investing or arbitrage). Only when these preconditions are fulfilled it is possible for the investor to choose the derivative instrument or a combination of instruments with the appropriate risk profile.

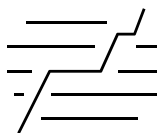
Derivative instruments can be both standardised and non-standardised. The distinguishing characteristic of standardised instruments is that the terms of the contract are always the same, and the instrument is normally traded at an execution venue, where prices are constantly published.

Non-standardised instruments are those which are individually negotiated between parties. Such instruments are usually referred to as OTC instruments.



Complexity

All derivatives are treated as complex financial instruments.



Risks

Investing in derivative instruments involves assuming additional risks, unlike “at sight” investments made directly in the underlying assets. Investing directly in the underlying instruments, may, in a worst case scenario, lose the entire investment. In the case of some investments in derivatives the investor could potentially lose the entire investment and take on additional obligations (i.e. the equivalent of debt) as well. Another characteristic of derivative instruments is that changes to those market value are generally swifter and sharper than changes to underlying assets themselves. It is therefore necessary that investors in derivative instruments not only fully understand the risks involved, but that they are also constantly prepared to take action to avoid severe losses if the market develops unfavorably.

Changes in the value. The value of a derivative instrument is dependent on both movements in the price of the underlying assets, as well as on the remaining duration of the contract. Depending on the characteristics of the instrument, a movement in the price of the underlying assets will often result in a larger movement in the price of the derivative contract. The relative change in price of the derivative is therefore often larger than the change in the underlying assets. This is known as the leveraged effect, and it may lead to higher yields on the invested capital than the same amount invested in the underlying assets would have produced. A successful investment may quickly multiply the invested capital several times. Conversely, the leveraging effect may work to the investor’s disadvantage, resulting in a larger loss on the derivative instrument than would have been the case for an investment in the underlying assets. If the price of the underlying assets develops differently than expected, the entire invested capital may be lost. The possibility of a gain or loss is affected by the characteristics of the derivative, such as maturity and leverage effect. The duration of derivative instruments may vary from couple of days to several years. The size of leverage effect is directly affected by the maturity of the instrument (for longer remaining maturity the leverage effect will be larger). Larger leverage effect is related with higher risk. Price movements often could be larger for instruments with only a short period of their duration remaining, however leverage effect will be larger for instruments with longer remaining maturity.

Risks of losing more than the invested capital. Investments can be with limited or unlimited risk.

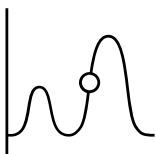
The purchase of options involves limited risk. At worst, the entire amount of the capital invested is lost.

On the other hand, there are certain types of derivatives with unlimited risk that can require additional capital over and above the original investment. This obligation to make such margin payments can amount to many times the original level of the investment.

Credit risk. The risk that a counterparty or trading venue where an instrument is purchased may not pay off its obligations or become insolvent.

Liquidity risk. The risk that under a reduced liquidity situation it will not be possible to buy or sell an instrument. Oversight liquidity risk is closely related to credit risk, as the contract can only be terminated with the consent of the counterparty.

More detailed information about the risks associated with derivative instruments is provided in the **Key Information Document (KID) of the derivatives**. The Key Information Documents of SEB’s derivative instruments are available at www.seb.it/KID.



Different kind of derivative instruments

An option is an agreement between two parties under which the issuer of an option is obliged to buy or sell the underlying asset at a pre-agreed price to the option holder. The buyer of the option pays a fee (premium) to the issuer upon concluding the agreement, and thereby acquires a right, but not an obligation, to call on the exercise of the option under the agreement. Therefore, buying an option is less risky than selling (issuing) an option because when buying an option you can lose up to the premium paid, but when selling an option you can lose more than the premium. The size of option premium mostly depends on volatility of the underlying asset (higher volatility – higher premium price) and the strike price (price at which underlying asset could be bought or sold) of the chosen option. Each option contract will have a specific expiration date by which the holder can exercise their option.

Call options allow the holder to buy the underlying asset at a stated price (strike) within a specific timeframe or on a certain date and time.

Put options allow the holder to sell the asset at a stated price within a specific timeframe or on a certain date and time.

Option value mostly depends on the price movement of the underlying asset. For example, if the market price of the underlying asset increases, the value of the call option increases and the value of put option decreases.

There are two main types of options.

- **An American option** entitles its holder to exercise the option at any day before its term.
- **A European option** may only be exercised at the end of its duration.

A forward is a contract under which the parties involved agree on the right and obligation to buy or sell in the future the underlying asset at a predetermined price.

Depending on the underlying asset, a forward can be agreed with a physical delivery of the underlying asset or without. For example, currency forward will often include obligation of physical delivery of the currency. Forward will often be traded on the OTC market and hence could be tailor made.

Price of the forward agreement will depend and the exchange rate of two currencies today and interest rate difference that can be earned on both currencies. Accordingly currency yielding more will be cheaper in future compared to today as one would benefit of holding that currency compared to other. Difference between today's and future price is called forward or swap points. Forward price will never be based on bank's speculation on possible future exchange rate, however price will include bank's margin.

A swap is an agreement between parties to swap at a certain time streams of payments on a regular basis or as a one-off payment. Swaps are usually traded on the OTC market. There could be different combinations of swaps, for example a cross-currency swap that will include different currencies and different interest rates.

A currency swap is a swap where one party borrows currency from another party and in exchange lends another currency to that party for a certain time. Price of the swap is quoted as a difference between two exchange rates – first, at which both currencies will be exchanged initially and second, at which both currencies will be switched back. Price of the swap will depend on interest rates that can be earned on each currency and never on bank's speculation on possible exchange rate in the future. Currency with higher interest rate will be more costly to borrow in swap and vice versa. Swap price usually will include also bank's margin.

An interest rate swap is a swap where several time streams of payments are exchanged. For example, under a fixed to floating interest rate swap one party will pay flows according to predetermined fixed rate and receive from other party flows according to periodic fixings of certain index, for example EURIBOR or LIBOR.

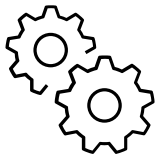
The payment in swap accordingly will be the difference between those two cash flows, meaning one party will pay net difference and other party will receive net difference. When interest rate swap is quoted by a bank to the client, price (fixed rate) of the swap will usually include also bank's margin.

There could generally be a non-amortizing swap where notional amount is fixed for the full deal maturity and an amortizing swap where the notional principal amount is reduced at pre-agreed amounts and dates.

When a swap is concluded its value will depend on the fluctuations of the underlying asset. When price of the underlying asset decreases market value of the swap increases for the fixed rate payer as one could say that fixed rate payer is a buyer of the swap and hence will benefit when price goes upward and vice versa.

A cross currency swap is a type of interest rate swap, where the swap is done across two currencies - interest payments denominated in one currency are swapped against interest payments denominated in another currency. The mutual interest payments can be fixed or floating. The parties may agree on an exchange of principal amounts at the start and maturity date of the swap. Cross currency swaps are used mainly in case a company has cash flows and obligations in different currencies.

A future is a contract under which the parties involved agree to take on liabilities on the future. A future could be a contract of the right and obligation to buy or sell in the future the underlying asset at a predetermined price (with physical delivery) or a future also could be a contract of the right and obligation to settle a difference between future price and reference price (without a physical delivery). Futures are often traded on the regulated venues and could include obligation to post collateral at the beginning as well as later in case of unfavorable market movements. Profits and losses are monitored on a daily basis for the duration of the contract period, which accordingly may have consequences for any collateral which is required for the conclusion of the contract.



Taxation

Taxes can be applied for activity of investing. The tax treatment depends on the individual circumstances of each client and may be subject to change in the future. Clients should independently evaluate all circumstances related to taxes on investments or their return.